



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0776

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / December 2012				
System No:		Billing Agency: RHB		Samples Received by Lab:	12/18/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0776-01	Sample ID: R 96103 Sample Type: Seawater	Time Collected: 12/17/2012 11:34	Sampling Point: Songs A	
K-40	EPA 901.1	332 +/- 18.1	64.4	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804

510-620-2911

510-620-2930

Attn: Shiyamalie Rubera

Date Received

12-18-12

Lab No. (Leave Blank)

12-0774

Date & Time Sampled

12/17/12 1134

Serial Number

R 96103

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave.

Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Reporting Information

Name: Steve Hsu

Dept./Branch: CDPH-RHB

Address: PO Box 99-7414 MS 7610

Sacramento, Ca 95899

Telephone No.: 916-440-7940

Sample Information

System Name / Facility:

SONGS

Sampling Point (s):

A

Billing Agency

- ☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

System No.:

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Date/Time ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. 12/17/12 Jenny Smith 12/17/12
 Date Name (Print) Date
1134 MBC 1700
 Time Custody Received Organization Signature Time Custody Released
 2. _____
 Date Name (Print) Date
 Time Custody Received Organization Signature Time Custody Released
 3. 12-18-12 VA _____
 Date Name (Print) Date
11:30 DWRLB _____
 Time Custody Received Organization Signature Time Custody Released

LABORATORY REMARKS (Leave Blank)

≤ 0.01 mR/hr

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



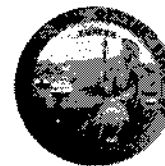
State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0777

Investigator: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / December 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 12/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0777-01	Sample ID: R 96104	Time Collected: 12/17/2012 11:34	Sampling Point: SONGS A	
	Sample Type: Seawater			
Tritium	EPA 906.0	-52.7 +/- 148	256	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804 510-620-2930

510-620-2911

Attn: Shiyamalie Rubera

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Sample Information

System Name / Facility:

Sampling Point (s):

SONGS
A

System No.:

Date Received

12-07-12 12:00

Lab No. (Leave Blank)

12-0777

Date & Time Sampled

12/17/12 1134

Serial Number

R 96104

Reporting Information

Name: Steve HSU

Dept./Branch: CDPH-RHB

Address: PO Box 99-7414 MS T610
Sacramento, Ca 95899

Telephone No.: 916-440-7440

Billing Agency

- ☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Date/Time ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 12/17/12 Name (Print): Jenny Smith Signature: [Signature] Date: 12/17/12
 Time Custody Received: 1134 Organization: MBC Time Custody Released: 1700
 2. Date: _____ Name (Print): _____ Signature: _____ Date: _____
 Time Custody Received: _____ Organization: _____ Signature: _____ Date: _____
 3. Date: _____ Name (Print): _____ Signature: _____ Date: _____
 Time Custody Received: _____ Organization: _____ Signature: _____ Date: _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0778

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / December 2012				
System No:		Billing Agency: RHB		Samples Received by Lab:	12/18/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0778-01	Sample ID: R 96105 Sample Type: Seawater	Time Collected: 12/17/2012 11:50	Sampling Point: SONGS B	
K-40	EPA 901.1	323 +/- 17.1	59.2	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804 510-620-2930

510-620-2911 Attn: Shyamalie Rubera

Date Received

12-0-18-12

Lab No. (Leave Blank)

120778

Date & Time Sampled

12/17/12 1150

Serial Number

R 96105

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Sample Information

System Name / Facility:

SONGS

Sampling Point (s):

B

System No.:

Reporting Information

Name: Steve HSU

Dept./Branch: CDPH-RHB

Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899

Telephone No.: 916-440-7940

Billing Agency

- ☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

Air Filters

Date/Time

Finishing: _____

Starting: _____

Net (M³) _____

Air Charcoal Cartridge

Seawater

☐ Milk☐ Wipes☐ Radon Canister

Sludge (Semi-solid Samples)

☐ Soil/Sediment☐ Biota (Type): _____☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 12/17/12 Name (Print): Jenny Smith
 Time Custody Received: 1150 Organization: MBC Signature: [Signature] Date: 12/17/12
 Time Custody Released: 1700
 2. Date: _____ Name (Print): _____ Signature: _____ Date: _____
 Time Custody Released: _____
 3. Date: 12/18/12 Name (Print): JMA Signature: _____ Date: _____
 Time Custody Received: 11:30 Organization: DWRLB Signature: _____ Date: _____
 Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable

≤ 0.01 mR/HR



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0779

Investigator: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / December 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 12/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0779-01	Sample ID: R 96107	Time Collected: 12/17/2012 11:50	Sampling Point: SONGS B	
	Sample Type: Seawater			
Tritium	EPA 906.0	-87.8 +/- 147	256	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804 510-620-2930

510-620-2911

Attn: Shiyamalie Robera

Date Received

12-18-12

Lab No. (Leave Blank)

12-0779

Date & Time Sampled

12/17/12 1150

Serial Number

R 96107

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Sample Information

System Name / Facility:

Sampling Point (s):

SONGS
B

Reporting Information

Name: Steve HSU

Dept./Branch: CDPH - RHB

Address: PO Box 99-7414 MS 7610
Sacramento, Ca 95899

Telephone No.: 916-449-7940

Billing Agency

- ☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

System No.:

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

☐ Air Filters

Date/Time

Finishing: _____

Starting: _____

Net (M³) _____☒ Seawater☐ Milk☐ Wipes☐ Radon Canister☐ Sludge (Semi-solid Samples)☐ Soil/Sediment☐ Biota (Type): _____☐ Other: _____☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: _____

Iced/Frozen: _____

Other: _____

☐ Field Measurement: _____ mR/hr☐ Radionuclide(s), if known: _____☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. 12/17/12

Date

1150

Time Custody Received

Jenny Smith

Name (Print)

MBC

Organization

Signature

12/17/12

Date

1700

Time Custody Released

2. _____

Date

Name (Print)

Signature

Date

Time Custody Released

3. 12-18-12

Date

11:30

Time Custody Received

Organization

Name (Print)

UA

Organization

PWRLB

Signature

Date

Time Custody Released

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable

≤ 0.01 Mkr/LR



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0780

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / December 2012				
System No:		Billing Agency: RHB	Samples Received by Lab: 12/18/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0780-01	Sample ID: R 96110	Time Collected: 12/17/2012 11:43	Sampling Point: SONGS C	
	Sample Type: Seawater			
K-40	EPA 901.1	400 +/- 24.3	88.5	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804

510-620-2911

510-620-2930
Attn: Shiyamalie Rubera

Date Received

12-18-12

Lab No. (Leave Blank)

12-6240

Date & Time Sampled

12/17/12 143

Serial Number

R 96110

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Reporting Information

Name: Steve HSU

Dept./Branch: CDPH - RHB

Address: PO Box 99-7414 MS 7610
Sacramento, Ca 95899

Telephone No.: 916-440-7940

Sample Information

System Name / Facility:

SONGS

Sampling Point (s):

C

Billing Agency

☐ DWFOB ()☒ RHB☐ RWQCB ()☐ DTSC☐ DWTPB☐ FDB☐ DWR☐ CDFG☐ EMB☐ Other (Specify)

System No.:

TYPE OF SAMPLE (Check all applicable boxes)

☐ Drinking Water☐ Groundwater☐ Surface Water☐ Wastewater☐ Raw☐ Water Treatment Plant (WTP)☐ Distribution System☐ Point of Use (POU)☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted☐ Air Filters

Date/Time

☒ Seawater☐ Sludge (Semi-solid Samples)

Finishing:

☐ Milk☐ Soil/Sediment

Starting:

☐ Wipes☐ Biota (Type):Net (M³)☐ Radon Canister☐ Other:☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added:

Iced/Frozen:

Other:

☐ Field Measurement: mR/hr☐ Radionuclide(s), if known:☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

☐ Gross Alpha☐ Gross Beta☒ Gamma Scan☐ Total Uranium☐ Total Beta (LSC)☐ NORM (Gamma)☐ Total Radium☐ Tritium (³H)☐ Isotopic Americium / Curium☐ Radium-226☐ Carbon-14☐ Isotopic Plutonium☐ Radium-228☐ Iodine-131☐ Isotopic Thorium☐ Radon-222☐ Strontium-89, 90☐ Isotopic Uranium☐ Other (Specify):☐ Nickel-63☐ Iron-55

CHAIN OF CUSTODY

1. 12/17/12

Date

Jenny Smith

Name (Print)

143

Time Custody Received

MBC

Organization

Signature

12/17/12

Date

1700

Time Custody Released

2. Date

Name (Print)

Date

Time Custody Received

Organization

Signature

Time Custody Released

3. 12-18-12

Date

VA

Name (Print)

11:30

Time Custody Received

DWRLB

Organization

Signature

Date

Time Custody Released

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

☐ Acceptable☐ Broken Container☐ Leaked in Transit☐ Improper Container☐ Holding Time Exceeded☐ Sample Not Cooled☐ Insufficient Sample

B. Preservatives/Carriers:

☐ Added While Sampling☐ Added in Laboratory☐ Not Added☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID: 12-0781

Investigator: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / December 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 12/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0781-01	Sample ID: R 96112	Time Collected: 12/17/2012 11:43	Sampling Point: SONGS C	
	Sample Type: Seawater			
Tritium	EPA 906.0	-11.7 +/- 149	256	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804 510-620-2930

510-620-2911

Attn: Shiyamalie Rubera

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Sample Information

System Name / Facility: SONGS

Sampling Point (s): C

System No.:

Date Received: 12-14-12

Lab No. (Leave Blank): 12-0781

Date & Time Sampled: 12/17/12 1143

Serial Number: R 96112

Reporting Information

Name: Steve Hsu

Dept./Branch: CDPH - RHB

Address: PO Box 99-7414 MS 7010 Sacramento, Ca 95899

Telephone No.: 916-440-7940

Billing Agency

☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (3H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 12/17/12 Name (Print): Jenny Smith
 Time Custody Received: 1143 Organization: MBC Signature: [Signature] Date: 12/17/12
 Time Custody Released: 1700
 2. Date: _____ Name (Print): _____ Signature: _____ Date: _____
 Time Custody Received: _____ Organization: _____ Signature: _____ Date: _____
 Time Custody Released: _____
 3. Date: 12-18-12 Name (Print): UA
 Time Custody Received: 11:30 Organization: DWRLB Signature: [Signature] Date: _____
 Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
 B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0782

Collector:	James Nunez	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science 3000			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA		Sacramento	CA 95814-5006
	Phone Number: 714 850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / December 2012				
System No:		Billing Agency: RHB		Samples Received by Lab:	12/18/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0782-01	Sample ID: R 96115 Sample Type: Seawater	Time Collected: 12/17/2012 10:25	Sampling Point: SONGS D	
K-40	EPA 901.1	363 +/- 21.6	80.6	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804 510-620-2930

510-620-2911 Attn: Shiyamalie Rubera

Date Received

12-18-12

Lab No. (Leave Blank)

120782

Date & Time Sampled

12/17/12 1025

Serial Number

R 96115

Collector Information

Name: James Nuñez

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Reporting Information

Name: Steve Hsu

Dept./Branch: CDPH - RHB

Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899

Telephone No.: 916-440-1740

Sample Information

System Name / Facility: SONGS

Sampling Point (s): D

System No.:

Billing Agency

☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

Air Filters

Date/Time

Finishing: _____

Starting: _____

Net (M³) _____

Air Charcoal Cartridge

Seawater

☐ Milk☐ Wipes☐ Radon Canister

Sludge (Semi-solid Samples)

☐ Soil/Sediment☐ Biota (Type): _____☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|---|---|-----------|---|
| 1. 12/17/12
Date
1025
Time Custody Received | James Nuñez
Name (Print)
MBC Applied Environmental Sciences
Organization | Signature | 12/17/12
Date
1500
Time Custody Released |
| 2. 12/17/12
Date
1500
Time Custody Received | Jenny Smith
Name (Print)
MBC
Organization | Signature | 12/17/12
Date
1700
Time Custody Released |
| 3. 12-18-12
Date
11:30
Time Custody Received | UA
Name (Print)
DWRB
Organization | Signature | Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



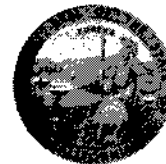
State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0783

Investigator: James Nunez	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science 3000		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA		Sacramento CA	95814-5006
Phone Number: 714 850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / December 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 12/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0783-01	Sample ID: R 96116	Time Collected: 12/17/2012 10:25	Sampling Point: SONGS D	
	Sample Type: Seawater			
Tritium	EPA 906.0	-176 +/- 145	256	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804 510-620-2930

510-620-2911 Attn: Shyamalie Rubera

Date Received

12-18-12

Lab No. (Leave Blank)

12-0783

Date & Time Sampled

12/17/12 1025

Serial Number

R 96116

Collector Information

Name: James Nuñez

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4830

Reporting Information

Name: Steve HSU

Dept./Branch: CDPH-RHB

Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899

Telephone No.: 916-440-7940

Sample Information

System Name / Facility:

SONGS
D

Sampling Point (s):

Billing Agency

☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

System No.:

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted

☐ Air Filters

Date/Time

☒ Seawater☐ Sludge (Semi-solid Samples)

Finishing: _____

☐ Milk☐ Soil/Sediment

Starting: _____

☐ Wipes☐ Biota (Type): _____Net (M³) _____☐ Radon Canister☐ Other: _____☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (T₃H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

No.	Date	Name (Print)	Organization	Signature	Date	Name (Print)	Organization	Signature
1.	12/17/12	James Nuñez	MBC Applied Environmental Sciences	[Signature]	12/17/12			
	1025				1500			
2.	12/17/12	Jenny Smith	MBC	[Signature]	12/17/12			
	1500				1700			
3.	12-18-12	UA	DWR/LCB	[Signature]				
	11:30							

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0622

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / November 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 11/21/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0622-01	Sample ID: R 92346	Time Collected: 11/19/2012 11:34	Sampling Point: SONGS A	
	Sample Type: Seawater			
K-40	EPA 901.1	365 +/- 23.2	84.9	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 11-21-12	Lab No. (Leave Blank) 12-0622
		Date & Time Sampled 11/19/12 1134	Serial Number R 92346
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept./Branch: CDPH - RAB Address: PO Box 99-744 MS. 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS... Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> ERHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input checked="" type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (SC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|-----------------------------|--------------------------|-----------------------|-----------------------------|
| 1. Date 11/19/12 | Name (Print) Jenny Smith | Signature [Signature] | Date 11/20/12 |
| Time Custody Received 1134 | Organization MBC | | Time Custody Released 1700 |
| 2. Date _____ | Name (Print) _____ | Signature _____ | Date _____ |
| Time Custody Received _____ | Organization _____ | | Time Custody Released _____ |
| 3. Date 11-21-12 | Name (Print) UA | Signature [Signature] | Date _____ |
| Time Custody Received 1140 | Organization DWR/LB | | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0623

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / November 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 11/21/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0623-01	Sample ID: R 92349	Time Collected: 11/19/2012 11:34	Sampling Point: SONGS A	
	Sample Type: Seawater			
Tritium	EPA 906.0	-81.7 +/- 142	248	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyumalie Rubera		Date Received 11-21-12	Lab No. (Leave Blank) 12-0623
		Date & Time Sampled 11/19/12 1134	Serial Number R 92349
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

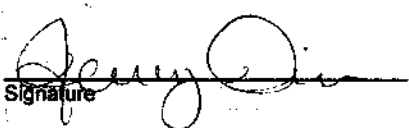
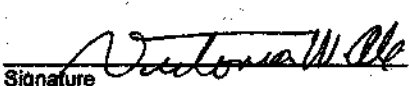
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ ☐ Filled/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|---------------------------|---|------------------------------|
| 1. | Date: 11/19/12 | Name (Print): Jenny Smith | Signature:  | Date: 11/20/12 |
| | Time Custody Received: 1134 | Organization: MBC | Signature: _____ | Time Custody Released: 1200 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. | Date: 11-21-12 | Name (Print): UA | Signature:  | Date: _____ |
| | Time Custody Received: 11:40 | Organization: DWRLB | Signature: _____ | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 mR/hr
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0624

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / November 2012				
System No:	Billing Agency: RHB		Samples Received by Lab: 11/21/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0624-01	Sample ID: R 92351 Sample Type: Seawater	Time Collected: 11/19/2012 11:51	Sampling Point: SONGS B	
K-40	EPA 901.1	331 +/- 20.6	77.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyamalie Rubera		Date Received 11-21-12	Lab No. (Leave Blank) 12-0624
		Date & Time Sampled 11/19/12 1151	Serial Number R 92351
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk
 Starting: _____
☐ Wipes ☐ Soil/Sediment
 Net (M³) _____
☐ Radon Canister ☐ Biota (Type): _____
☐ Air Charcoal Cartridge ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☒ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|----|--|--|---|
| 1. | Date: 11/19/12
Time Custody Received: 1151 | Name (Print): Jenny Smith
Organization: MBC | Signature: [Signature]
Date: 11/20/12
Time Custody Released: 1700 |
| 2. | Date: _____
Time Custody Received: _____ | Name (Print): _____
Organization: _____ | Signature: _____
Date: _____
Time Custody Released: _____ |
| 3. | Date: 11-21-12
Time Custody Received: 11:40 | Name (Print): UA
Organization: DWRLB | Signature: [Signature]
Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** $\leq 0.01 \mu R/HR$
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0625

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / November 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 11/21/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0625-01	Sample ID: R 92352	Time Collected: 11/19/2012 11:51	Sampling Point: SONGS B	
	Sample Type: Seawater			
Tritium	EPA 906.0	9.73 +/- 145	248	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Alt: Shiyamalie Rubera		Date Received 11-21-12	Lab No. (Leave Blank) 12-0625
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Date & Time Sampled 11/19/12 1151	Serial Number R 92352
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Reporting Information Name: Steve HSU Dept/Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☒ Milk ☐ Soil/Sediment
 Starting: _____
☒ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☒ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (T₃H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|----|--|--|---|
| 1. | Date: 11/19/12
Time Custody Received: 1151 | Name (Print): Jenny Smith
Organization: MBC | Signature: [Signature]
Date: 11/20/12
Time Custody Released: 1700 |
| 2. | Date: _____
Time Custody Received: _____ | Name (Print): _____
Organization: _____ | Signature: _____
Date: _____
Time Custody Released: _____ |
| 3. | Date: 11-21-12
Time Custody Received: 11:40 | Name (Print): UA
Organization: DWRLB | Signature: [Signature]
Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: $\leq 0.01 \text{ mR/hr}$
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☒ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0626

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / November 2012				
System No:		Billing Agency: RHB	Samples Received by Lab: 11/21/2012		

Parameter	Method	Result +/- CE	MDA ₉₅	Units
Lab No: 12-0626-01	Sample ID: R 92354 Sample Type: Seawater	Time Collected: 11/19/2012 11:42	Sampling Point: SONGS C	
K-40	EPA 901.1	451 +/- 22.7	82.5	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level which is the LLD₉₅ divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD₉₅ is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyamalie Rubera		Date Received 11-21-12	Lab No. (Leave Blank) 12-0626
		Date & Time Sampled 11/19/12 1142	Serial Number R 92354
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Grove HSU Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Cooled/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

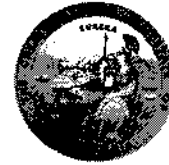
- | | | | | |
|----|------------------------------|---------------------------|------------------------|------------------------------|
| 1. | Date: 11/19/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 11/20/12 |
| | Time Custody Received: 1142 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. | Date: 11-21-12 | Name (Print): VA | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 11:40 | Organization: DWRLB | Signature: [Signature] | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 50.01 mR/hr



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0627

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP . November 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 11/19/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0627-01	Sample ID: R 92357	Time Collected: 11/19/2012 11:42	Sampling Point: SONGS C	
	Sample Type: Seawater			
Tritium	EPA 906.0	60.3 +/- 146	248	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyamalie Rubera		Date Received 11-21-12	Lab No. (Leave Blank) 12-0627
		Date & Time Sampled 11/19/12 1142	Serial Number R 92357
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Date/Time ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Red/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2914)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (H³) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

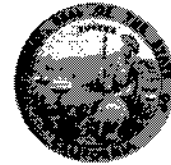
- | | | | | |
|----|------------------------------|---------------------------|------------------------|------------------------------|
| 1. | Date: 11/19/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 11/20/12 |
| | Time Custody Received: 1142 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. | Date: 11-21-12 | Name (Print): UA | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 1140 | Organization: DURLB | Signature: [Signature] | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 uR/LR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☒ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0628

Collector:	James Nunez	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science 3000			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA		Sacramento	CA 95814-5006
	Phone Number: 714 850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / November 2012				
System No:		Billing Agency: RHB	Samples Received by Lab: 11/21/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0628-01	Sample ID: R 92359	Time Collected: 11/19/2012 10:05	Sampling Point: SONGS D	
	Sample Type: Seawater			
K-40	EPA 901.1	338 +/- 18.3	64.2	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyamake Rubera		Date Received 11-21-12	Lab No. (Leave Blank) 12-0624
Collector Information Name: JAMES NUÑEZ Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-440-4830		Date & Time Sampled 11/19/12 1005	Serial Number R 92359
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7840	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
 Starting: _____
 Net (M³) _____
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Lead/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (H³) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|--|------------------------|------------------------------|
| 1. | Date: 11/19/12 | Name (Print): James Nuñez | Signature: [Signature] | Date: 11/19/12 |
| | Time Custody Received: 1005 | Organization: MBC Applied Environmental Sciences | Signature: [Signature] | Time Custody Released: 1500 |
| 2. | Date: 11/19/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 11/20/12 |
| | Time Custody Received: 1500 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 3. | Date: 11/21/12 | Name (Print): V.R. | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 1111A | Organization: DWR | Signature: [Signature] | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 0.07 MK/LIR



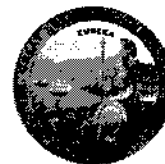
State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0629

Collector: James Nunez	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science 3000		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA		Sacramento CA	95814-5006
Phone Number: 714 850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / November 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 11/21/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0629-01	Sample ID: R 92360	Time Collected: 11/19/2012 10:05	Sampling Point: SONGS D	
	Sample Type: Seawater			
Tritium	EPA 906.0	1.95 +/- 145	248	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyamalie Rubera	Date Received 11-21-12	Lab No. (Leave Blank) 12-0629
	Date & Time Sampled 11/19/12 1005	Serial Number R 92360
Collector Information Name: James Nuñez Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830	Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____ | <input type="checkbox"/> Cooled/Frozen: _____ | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Field Measurement: _____ mR/hr | <input type="checkbox"/> Radionuclide(s), if known: _____ | |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) | | |

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (ESC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|------------------------------|--|------------------|------------------------------|
| 1. Date: 11/19/12 | Name (Print): James Nuñez | Signature: _____ | Date: 11/19/12 |
| Time Custody Received: 1005 | Organization: MBC Applied Environmental Sciences | Signature: _____ | Time Custody Released: 1500 |
| 2. Date: 11/19/12 | Name (Print): Jenny Smith | Signature: _____ | Date: 11/20/12 |
| Time Custody Received: 1500 | Organization: MBC | Signature: _____ | Time Custody Released: 1700 |
| 3. Date: 11-21-12 | Name (Print): UA | Signature: _____ | Date: _____ |
| Time Custody Received: 11:40 | Organization: DPH-LB | Signature: _____ | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- Condition at Time of Receipt: ≤ 0.01 MR/hr
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0534

Collector:	Wayne Dossett	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Sciences, 30			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number:	714-850-4830		Phone Number:	916-440-7955
Site/Project Name:	San Onofre NPP / October 1012				
System No:		Billing Agency: RHB		Samples Received by Lab:	10/17/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0534-01	Sample ID: R 92278 Sample Type: Seawater	Time Collected: 10/15/2012 13:31	Sampling Point: SONGS A	
K-40	EPA 901.1	346 +/- 18.0	62.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water. EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Alt: 510-620-2930 Attn: Shiyamalie Rubera		Date Received 10-17-12	Lab No. (Leave Blank) 1210534
Collector Information Name: Wayne Dussett Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714 850-4030		Date & Time Sampled 10/15/12 1331	Serial Number R 92278
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Ice/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☒ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-----------------------------|-----------------------------|------------------------|------------------------------|
| 1. | Date: 8/15/12 | Name (Print): Wayne Dussett | Signature: [Signature] | Date: 8/16/12 |
| | Time Custody Received: 1331 | Organization: MBC | | Time Custody Released: 0820 |
| 2. | Date: 8/16/12 | Name (Print): Kenny Smith | Signature: [Signature] | Date: 8/16/12 |
| | Time Custody Received: 0820 | Organization: MBC | | Time Custody Released: 1700 |
| 3. | Date: 10/17/12 | Name (Print): VA | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 1030 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: $\leq 0.01 \text{ MR/HR}$
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
 B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0535

Collector: Wayne Dossett MBC Applied Environmental Sciences, 30 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / October 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0535-01	Sample ID: R 92279 Sample Type: Seawater	Time Collected: 10/15/2012 13:31	Sampling Point: SONGS A	
Tritium	EPA 906.0	-182 +/- 148	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 10-17-12	Lab No. (Leave Blank) 12-0535
Collector Information Name: Wayne Dossett Dept/Branch: 3000 Red Hill Ave. Costa Mesa, CA Address: 92626 Telephone No.: 714-850-4830		Date & Time Sampled 10/15/12 1331	Serial Number R 92279
Sample Information System Name / Facility: Sampling Point (s): System No.:		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
SONGS A		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk
 Starting: _____
☐ Wipes ☐ Soil/Sediment
 Net (M³) _____
☐ Radon Canister ☐ Biota (Type): _____
☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Iced/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (3H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | | | | | |
|----|-----------------------|----------|--------------|---------------|-----------|----------------|-----------------------|----------|
| 1. | Date | 10/15/12 | Name (Print) | Wayne Dossett | Signature | Wayne Dossett | Date | 10/16/12 |
| | Time Custody Received | 1331 | Organization | MBC | | | Time Custody Released | 0820 |
| 2. | Date | 10/16/12 | Name (Print) | Jenny Smith | Signature | Jenny Smith | Date | 10/16/12 |
| | Time Custody Received | 0820 | Organization | MBC | | | Time Custody Released | 1700 |
| 3. | Date | 10-17-12 | Name (Print) | VA | Signature | Valma M. Oller | Date | |
| | Time Custody Received | 10:30 | Organization | DWRLB | | | Time Custody Released | |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 mR/HR
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0536

Collector:	Wayne Dossett	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Sciences, 30			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / October 2012				
System No:		Billing Agency: RHB		Samples Received by Lab:	10/17/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0536-01	Sample ID: R 92280 Sample Type: Seawater	Time Collected: 10/15/2012 13:45	Sampling Point: SONGS B	
K-40	EPA 901.1	289 +/- 22.0	84.8	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 10-17-12	Lab No. (Leave Blank) 12-0536
Address: 510-620-2930 Attn: Shiyamalie Rubera		Date & Time Sampled 10/15/12 1345	Serial Number R 92280
Collector Information Name: Wayne Dossett Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-440-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Cooled/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-------------------------------------|------------------------------------|---------------------------------|------------------------------------|
| 1. | Date: 10/15/12 | Name (Print): Wayne Dossett | Signature: <i>Wayne Dossett</i> | Date: 10/16/12 |
| | Time Custody Received: 1345 | Organization: MBC | | Time Custody Released: 0820 |
| 2. | Date: 10/16/12 | Name (Print): Jenny Smith | Signature: <i>Jenny Smith</i> | Date: 10/16/12 |
| | Time Custody Received: 0820 | Organization: MBC | | Time Custody Released: 1700 |
| 3. | Date: 10-17-12 | Name (Print): VA | Signature: <i>Valerie</i> | Date: _____ |
| | Time Custody Received: 10:30 | Organization: DWRLB | Signature: <i>Valerie</i> | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** **± 0.01 uR/hr**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0537

Collector: Wayne Dossett MBC Applied Environmental Sciences, 30 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / October 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0537-01	Sample ID: R 92282	Time Collected: 10/15/2012 13:45	Sampling Point: SONGS B	
	Sample Type: Seawater			
Tritium	EPA 906.0	-250 +/- 147	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 10-17-12	Lab No. (Leave Blank) 12-0537
510-620-29130 Attn: Shyamantika Rubera		Date & Time Sampled 10/15/12 - 1345	Serial Number R 92282/
Collector Information Name: Wayne Dossett Dept/Branch: MHC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | |
|----|--|---|
| 1. | Date: 10/15/12
Time Custody Received: 1345 | Name (Print): Wayne Dossett
Organization: MHC
Signature: [Signature]
Date: 10/16/12
Time Custody Released: 0820 |
| 2. | Date: 10/16/12
Time Custody Received: 0820 | Name (Print): Janny Smith
Organization: MHC
Signature: [Signature]
Date: 10/16/12
Time Custody Released: 1700 |
| 3. | Date: 10-17-12
Time Custody Received: 10:30 | Name (Print): U.A.
Organization: DWR L.B.
Signature: [Signature]
Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: = 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0538

Collector:	Wayne Dossett	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Sciences, 30			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number:	714-850-4830		Phone Number:	916-440-7955
Site/Project Name:	San Onofre NPP / October 2012				
System No:	Billing Agency: RHB		Samples Received by Lab: 10/17/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0538-01	Sample ID: R 92285 Sample Type: Seawater	Time Collected: 10/15/2012 13:39	Sampling Point: SONGS C	
K-40	EPA 901.1	327 +/- 21.2	81.5	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shyamalie Rubera		Date Received 10-17-12	Lab No. (Leave Blank) 12-0538
Collector Information Name: Wayne Dosssett Dept/Branch: MBC Applied Environmental Sciences Address: 3200 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 10/15/12 1339	Serial Number R 92285
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Reporting Information Name: Steve HSU Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Rad/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (ASC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

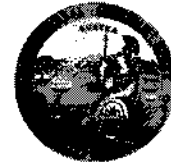
- | | | | | |
|----|------------------------------|------------------------------|------------------------|--------------------------------|
| 1. | Date: 10/15/12 | Name (Print): Wayne Dosssett | Signature: [Signature] | Date: 10/16/12 |
| | Time Custody Received: 1339 | Organization: MBC | Signature: [Signature] | Time Custody Released: 0820 |
| 2. | Date: 10/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 10/16/12 |
| | Time Custody Received: 0820 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 3. | Date: 10-17-12 | Name (Print): DA | Signature: [Signature] | Date: 10-17-12 |
| | Time Custody Received: 10:30 | Organization: DWRLB | Signature: [Signature] | Time Custody Released: [Blank] |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- = 0.002 mR/hr



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0541

Collector: Wayne Dossett MBC Applied Environmental Sciences, 30 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / October 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0541-01	Sample ID: R 92286 Sample Type: Seawater	Time Collected: 10/15/2012 13:39	Sampling Point: SONGS C	
Tritium	EPA 906.0	-147 +/- 149	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Sanyamale Rubera		Date Received 10-17-12	Lab No. (Leave Blank) 12-0841
Collector Information Name: Wayne Dosselt Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Contra Costa, CA 94626 Telephone No.: 714-850-4830		Date & Time Sampled 10/15/12 1339	Serial Number R 92286
Sample Information System Name / Facility: SONGS Sampling Point (s): System No.:		Reporting Information Name: Steve HSU Dept/Branch: CDPH - RHB Address: PO Box 99-7114 MS 7610 Sacramento, CA 95834 Telephone No.: 916-440-7110	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (SC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input checked="" type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|------------------------------|-----------------------------|------------------------|------------------------------|
| 1. Date: 10/15/12 | Name (Print): Wayne Dosselt | Signature: [Signature] | Date: 10/16/12 |
| Time Custody Received: 1339 | Organization: MBC | Signature: [Signature] | Time Custody Released: 0820 |
| 2. Date: 10/16/12 | Name (Print): [Signature] | Signature: [Signature] | Date: 10/16/12 |
| Time Custody Received: 0820 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 3. Date: 10-17-12 | Name (Print): [Signature] | Signature: [Signature] | Date: _____ |
| Time Custody Received: 10:30 | Organization: DWR B | Signature: [Signature] | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/hr
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



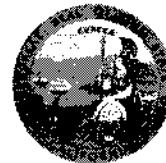
State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0540

Collector:	James Nunez	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science 3000			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA		Sacramento	CA 95814-5006
	Phone Number:	714 850-4830		Phone Number:	916-440-7955
Site/Project Name: San Onofre NPP / October 2012					
System No:		Billing Agency: RHB	Samples Received by Lab: 10/17/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0540-01	Sample ID: R 92289 Sample Type: Seawater	Time Collected: 10/15/2012 11:00	Sampling Point: SONGS D	
K-40	EPA 901.1	359 +/- 21.7	84.1	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shiyamalie Rubera		Date Received 10-17-12	Lab No. (Leave Blank) 12-0540
Collector Information Name: James Nuñez Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, CA 92626 Telephone No.: 714) 850-4830		Date & Time Sampled 10/15/12 1100	Serial Number R 92289
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH-KHB Address: PO Box 99-7414 MS 7010 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Iced/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | | | | | |
|----|-----------------------|----------|--------------|------------------------------------|-----------|-------------|-----------------------|----------|
| 1. | Date | 10/15/12 | Name (Print) | James Nuñez | Signature | [Signature] | Date | 10/16/12 |
| | Time Custody Received | 1100 | Organization | MBC Applied Environmental Sciences | | | Time Custody Released | 0820 |
| 2. | Date | 10/16/12 | Name (Print) | Jenny Smith | Signature | [Signature] | Date | 10/16/12 |
| | Time Custody Received | 0820 | Organization | MBC | | | Time Custody Released | 1700 |
| 3. | Date | 10-17-12 | Name (Print) | UA | Signature | [Signature] | Date | |
| | Time Custody Received | 10:30 | Organization | DWRL | | | Time Custody Released | |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: **E.O.D. MR/HR**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0539

Collector: James Nunez MBC Applied Environmental Science 3000 Costa Mesa CA Phone Number: 714 850-4830	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955
Site/Project Name: San Onofre NPP / October 2012	
System No:	Billing Agency: RHB
Samples Received by Lab: 10/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0539-01	Sample ID: R 92290 Sample Type: Seawater	Time Collected: 10/15/2012 11:00	Sampling Point: SONGS D	
Tritium	EPA 906.0	-287 +/- 146	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 10-17-12	Lab No. (Leave Blank) 12-0539
510-620-2930 Attn: Shyamalie Rubera		Date & Time Sampled 10/15/12 1100	Serial Number R 92290
Collector Information Name: James Nunez Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, CA 92626 Telephone No.: (714) 850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7419 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Used/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|--|------------------------|------------------------------|
| 1. | Date: 10/15/12 | Name (Print): James Nunez | Signature: [Signature] | Date: 10/16/12 |
| | Time Custody Received: 1100 | Organization: MBC Applied Environmental Sciences | | Time Custody Released: 0820 |
| 2. | Date: 10/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 10/16/12 |
| | Time Custody Received: 0820 | Organization: MBC | | Time Custody Released: 1700 |
| 3. | Date: 10-17-12 | Name (Print): UA | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 10:30 | Organization: DWR/B | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: < 0.01 uR/hr
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0463

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / September 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0463-01	Sample ID: R 92258 Sample Type: Seawater	Time Collected: 9/17/2012 12:23	Sampling Point: SONGS A	
K-40	EPA 901.1	399 +/- 19.2	64.0	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shiyumale Rubera		Date Received 9-20-12	Lab No. (Leave Blank) 12-0463
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Science Address: 3222 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 9/17/12 1223	Serial Number R 92258
Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RHB Address: P.O. Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940			
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

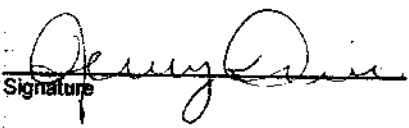
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Rad/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---------------------------------------|------------------------------------|---|--------------------------------------|
| 1. | Date
9/17/12 | Name (Print)
Jenny Smith | Signature
 | Date
9/18/12 |
| | Time Custody Received
1223 | Organization
MBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
9-20-12 | Name (Print)
UA | Signature | Date |
| | Time Custody Received
12:00 | Organization
DWRLB | Signature | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 MR/HR**



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0464

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / September 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0464-01	Sample ID: R 92263	Time Collected: 9/17/2012 12:23	Sampling Point: SONGS A	
	Sample Type: Seawater			
Tritium	EPA 906.0	-151 +/- 149	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 9/20/12	Lab No. (Leave Blank) 12-10464
Collector Information Name: Jenny Smith Dept/Branch: MIBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 9/17/12 1223	Serial Number R 92263
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95834 Telephone No.: 916-440-7940	
Billing Agency		<input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- _____ Red/Frozen: _____ Other: _____
_____ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (ES) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (T ₃ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|------------------------------|---------------------------|------------------|------------------------------|
| 1. Date: 9/17/12 | Name (Print): Jenny Smith | Signature: _____ | Date: 9/18/12 |
| Time Custody Received: 1223 | Organization: MIBC | Signature: _____ | Time Custody Released: 700 |
| 2. Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. Date: 9-20-12 | Name (Print): U/A | Signature: _____ | Date: _____ |
| Time Custody Received: 10:00 | Organization: DWR/LB | Signature: _____ | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MK/HR
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0465

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / September 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0465-01	Sample ID: R 92264 Sample Type: Seawater	Time Collected: 9/17/2012 12:39	Sampling Point: SONGS B	
K-40	EPA 901.1	346 +/- 20.8	77.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 9/20/12	Lab No. (Leave Blank) 12-0465
510-620-2930 Attn: Shiyamalle Kobera		Date & Time Sampled 9/17/12 1239	Serial Number R 92264
Collector Information Name: Jenny Smith Dept/Branch: MIBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RH13 Address: PO Box 991-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters _____ Date/Time _____ ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Cooled/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-----------------------------|--------------------------|-----------------------|-----------------------------|
| 1. | Date 9/17/12 | Name (Print) Jenny Smith | Signature [Signature] | Date 9/18/12 |
| | Time Custody Received 1239 | Organization MIBC | | Time Custody Released 1700 |
| 2. | Date _____ | Name (Print) _____ | Signature _____ | Date _____ |
| | Time Custody Received _____ | Organization _____ | | Time Custody Released _____ |
| 3. | Date 9/20/12 | Name (Print) UA | Signature [Signature] | Date _____ |
| | Time Custody Received 12:00 | Organization DWRLB | | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** ≤ 0.01 mR/hr
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0466

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / September 2012			
System No:		Billing Agency: RHB	Samples Received by Lab: 9/20/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0466-01	Sample ID: R 92265 Sample Type: Seawater	Time Collected: 9/17/2012 12:39	Sampling Point: SONGS B	
Tritium	EPA 906.0	-95.5 +/- 150	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 9-20-12	Lab No. (Leave Blank) 12-0466
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 9/17/12 1239	Serial Number R 92265
Reporting Information Name: Steve Hsu Dept./Branch: CIDPH-RH3 Address: 120 Box 99-7414 MS 7610 Telephone No.: 916-445-8440		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input checked="" type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.: _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time _____ ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

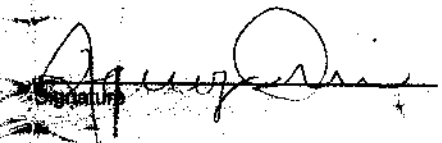
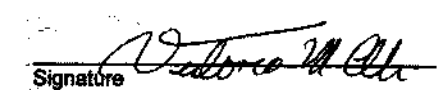
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------------|---------------------------------|--|-----------------------------------|
| 1. | Date 9/17/12 | Name (Print) Jenny Smith | Signature  | Date 9/18/12 |
| | Time Custody Received 1239 | Organization MBC | Signature _____ | Time Custody Released 1239 |
| 2. | Date _____ | Name (Print) _____ | Signature _____ | Date _____ |
| | Time Custody Received _____ | Organization _____ | Signature _____ | Time Custody Released _____ |
| 3. | Date 9-20-12 | Name (Print) UA | Signature  | Date _____ |
| | Time Custody Received 10:00 | Organization DWRLB | Signature _____ | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** **≤ 0.01 uR/hr**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0467

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / September 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0467-01	Sample ID: R 92266 Sample Type: Seawater	Time Collected: 9/17/2012 12:32	Sampling Point: SONGS C	
K-40	EPA 901.1	368 +/- 23.4	86.2	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804

510-620-2911

Date Received

9-20-12

Lab No. (Leave Blank)

12-0467

Date & Time Sampled

9/17/12 1232

Serial Number

R 92266

Collector Information

Name: Jenny Smith

Dept/Branch: MISC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, CA

92626

Telephone No.: 714-850-4830

Reporting Information

Name: Steve Hsu

Dept/Branch: CDPH-RHB

Address: PO Box 99-7114 173 7610

Telephone No.: 916-440-7940

Sample Information

System Name / Facility:

Sampling Point (s):

SONGS

System No.:

C

Billing Agency

- ☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³): _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 9/17/12 Name (Print): Jenny Smith
 Time Custody Received: 1232 Organization: MISC Signature: _____ Date: 9/18/12
 2. Date: _____ Name (Print): _____ Signature: _____ Time Custody Released: 1700
 Time Custody Received: _____ Organization: _____ Signature: _____ Date: _____
 3. Date: 9-20-12 Name (Print): VA Signature: _____ Time Custody Released: _____
 Time Custody Received: 10:00 Organization: DWRLB Signature: _____ Date: _____
 Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable

≤ 0.01 uR/hr



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0468

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / September 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0468-01	Sample ID: R 92268 Sample Type: Seawater	Time Collected: 9/17/2012 12:32	Sampling Point: SONGS C	
Tritium	EPA 906.0	-178 +/- 148	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G184 Richmond, CA 94804 510-620-2911		Date Received 9-20-12	Lab No. (Leave Blank) 12-0464
510-620-2930 Attn: Shyamalie Rubera		Date & Time Sampled 9/17/12 1232	Serial Number R 92268
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
 Starting: _____
 Net (M³) _____
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Radionuclide(s), if known: _____
☐ Other: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---------------------------------------|------------------------------------|---------------------------------|--------------------------------------|
| 1. | Date
9/17/12 | Name (Print)
Jenny Smith | Signature
<i>[Signature]</i> | Date
9/18/12 |
| | Time Custody Received
1232 | Organization
MBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
9-20-12 | Name (Print)
VA | Signature
<i>[Signature]</i> | Date |
| | Time Custody Received
10:00 | Organization
DWRLB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** **0.01 MR/HR**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0469

Collector: James Nunez MBC Applied Environmental Science 3000 Costa Mesa CA Phone Number: 714 850-4830	DWR	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / September 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0469-01	Sample ID: R 92271 Sample Type: Seawater	Time Collected: 9/17/2012 11:20	Sampling Point: SONGS D	
K-40	EPA 901.1	386 +/- 21.0	77.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 9-20-12	Lab No. (Leave Blank) 12-0469
510-620-2930 Attn: Shiyamalie Rubera		Date & Time Sampled 9/17/12 1120	Serial Number R 92271
Collector Information Name: James Nuñez Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO BOX 991741 MS 7610 Sacramento, Ca 95899 Telephone No.:	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Radionuclide(s), if known: _____
☐ Other: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☒ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | | | | | |
|----|-----------------------|----------------|--------------|--|-----------|--------------------|-----------------------|----------------|
| 1. | Date | 9/17/12 | Name (Print) | James Nuñez | Signature | [Signature] | Date | 9/17/12 |
| | Time Custody Received | 1120 | Organization | MBC Applied Environmental Science | | | Time Custody Released | 1500 |
| 2. | Date | 9/17/12 | Name (Print) | Jenny Smith | Signature | [Signature] | Date | 9/18/12 |
| | Time Custody Received | 1500 | Organization | MBC | | | Time Custody Released | 1700 |
| 3. | Date | 9-20-12 | Name (Print) | UA | Signature | [Signature] | Date | |
| | Time Custody Received | 10:00 | Organization | DWR/LB | Signature | [Signature] | Time Custody Released | |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 uR/hr**



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0470

Collector: James Nunez MBC Applied Environmental Science 3000 Costa Mesa CA Phone Number: 714 850-4830	DWR	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / September 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0470-01	Sample ID: R 92274 Sample Type: Seawater	Time Collected: 9/17/2012 11:20	Sampling Point: SONGS D	
Tritium	EPA 906.0	-216 +/- 147	261	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shyamalie Rubera	Date Received 9-20-12	Lab No. (Leave Blank) 12-0430
	Date & Time Sampled 9/17/12 1120	Serial Number R 92274
Collector Information Name: James Nuñez Dept./Branch: NBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830	Reporting Information Name: Steve HSU Dept./Branch: CDPH-R113 Address: PO BOX 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7000	
Sample Information System Name / Facility: 3ONGS Sampling Point (s): D System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input checked="" type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- | | | |
|--|---|---|
| <input type="checkbox"/> Air Filters
Finishing: _____
Starting: _____
Net (M³) _____
<input type="checkbox"/> Air Charcoal Cartridge | Date/Time _____
<input checked="" type="checkbox"/> Seawater
<input type="checkbox"/> Milk
<input type="checkbox"/> Wipes
<input type="checkbox"/> Radon Canister | <input type="checkbox"/> Sludge (Semi-solid Samples)
<input type="checkbox"/> Soil/Sediment
<input type="checkbox"/> Biota (Type): _____
<input type="checkbox"/> Other: _____ |
|--|---|---|

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|--|--|---|
| <input type="checkbox"/> Gross Alpha
<input type="checkbox"/> Total Uranium
<input type="checkbox"/> Total Radium
<input type="checkbox"/> Radium-226
<input type="checkbox"/> Radium-228
<input type="checkbox"/> Radon-222
<input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Gross Beta
<input type="checkbox"/> Total Beta (LSC)
<input checked="" type="checkbox"/> Tritium (³H)
<input type="checkbox"/> Carbon-14
<input type="checkbox"/> Iodine-131
<input type="checkbox"/> Strontium-89, 90
<input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Gamma Scan
<input type="checkbox"/> NORM (Gamma)
<input type="checkbox"/> Isotopic Americium / Curium
<input type="checkbox"/> Isotopic Plutonium
<input type="checkbox"/> Isotopic Thorium
<input type="checkbox"/> Isotopic Uranium
<input type="checkbox"/> Iron-55 |
|--|--|---|

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|---|------------------------|-----------------------------|
| 1. | Date: 9/17/12 | Name (Print): James Nuñez | Signature: [Signature] | Date: 9/17/12 |
| | Time Custody Received: 1120 | Organization: NBC Applied Environmental Science | | Time Custody Released: 1500 |
| 2. | Date: 9/17/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 9/18/12 |
| | Time Custody Received: 1500 | Organization: NBC | | Time Custody Released: 1700 |
| 3. | Date: 9-20-12 | Name (Print): UA | Signature: [Signature] | Date: |
| | Time Custody Received: 10:00 | Organization: DWRLB | | Time Custody Released: |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 0.01 mR/hr
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0361

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / August 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0361-01	Sample ID: R 92150 Sample Type: Seawater	Time Collected: 8/15/2012 12:20	Sampling Point: SONGS A	
K-40	EPA 901.1	356 +/- 17.7	59.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 8-17-12	Lab No. (Leave Blank) 12-0361
Attn: Shiyamalie Rubera 510-620-2930		Date & Time Sampled 8/15/12 1220	Serial Number R 92150
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sci Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7010 Sacramento, CA 95899 Telephone No.: 916-440-4440	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

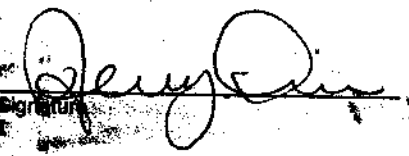
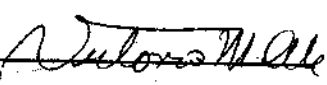
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (H³) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---------------------------------------|------------------------------------|---|--------------------------------------|
| 1. | Date
8/15/12 | Name (Print)
Jenny Smith | Signature
 | Date
8/16/12 |
| | Time Custody Received
1220 | Organization
MBC | Signature | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | Signature | Time Custody Released |
| 3. | Date
8-17-12 | Name (Print)
UA | Signature
 | Date |
| | Time Custody Received
13:00 | Organization
DWRLB | Signature | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 mR/hr**



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0362

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / August 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0362-01	Sample ID: R 92149	Time Collected: 8/15/2012 12:20	Sampling Point: SONGS A	
	Sample Type: Seawater			
Tritium	EPA 906.0	-106 +/- 150.0	262.0	pCi/l.

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamale Rubera		Date Received 8-17-12		Lab No. (Leave Blank) 12-0362	
		Date & Time Sampled 8/15/12 1220		Serial Number R 92149	
Collector Information Name: Jenny Smith Dept/Branch: NBC Applied Environmental Sciences Address: 2000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept/Branch: CDPH-RHB Address: PO Box 99744 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440			
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluorinated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (SC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|--|--|------------------------|--|
| 1. Date: 8/15/12
Time Custody Received: 1220 | Name (Print): Jenny Smith
Organization: NBC | Signature: [Signature] | Date: 8/16/12
Time Custody Released: 1700 |
| 2. Date: _____
Time Custody Received: _____ | Name (Print): _____
Organization: _____ | Signature: _____ | Date: _____
Time Custody Released: _____ |
| 3. Date: 8-17-12
Time Custody Received: 13:00 | Name (Print): UA
Organization: DWRLB | Signature: [Signature] | Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0363

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / August 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0363-01	Sample ID: R 92151 Sample Type: Seawater	Time Collected: 8/15/2012 12:35	Sampling Point: SONGS B	
K-40	EPA 901.1	347 +/- 22.6	83.3	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 8-17-12	Lab No. (Leave Blank) 12-03643
510-620-2930 Alt: Shiyamalie Rubera		Date & Time Sampled 8/15/12 1235	Serial Number R 92151
Collector Information Name: Jenny Smith Dept./Branch: MSC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 997414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS.B Sampling Point (s): System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Iced/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---|--|------------------------|--|
| 1. | Date: 8/15/12
Time Custody Received: 1235 | Name (Print): Jenny Smith
Organization: MSC | Signature: [Signature] | Date: 8/16/12
Time Custody Released: 1700 |
| 2. | Date: _____
Time Custody Received: _____ | Name (Print): _____
Organization: _____ | Signature: _____ | Date: _____
Time Custody Released: _____ |
| 3. | Date: 8-17-12
Time Custody Received: 13:00 | Name (Print): DJRIB
Organization: VA | Signature: [Signature] | Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 mR/hr
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0364

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / August 2012			
System No:		Billing Agency: RHB	Samples Received by Lab: 8/17/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0364-01	Sample ID: R 92145 Sample Type: Seawater	Time Collected: 8/15/2012 12:35	Sampling Point: SONGS B	
Tritium	EPA 906.0	-66.7 +/- 151.4	262	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804

510-620-2911

Date Received

8-17-12

Lab No. (Leave Blank)

12-0364

Date & Time Sampled

8/15/12 1235

Serial Number

R 92145

Collector Information

Name: Jenny Smith

Dept/Branch: MBC Applied Environmental Sci

Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626

Telephone No.: 714-850-4880

Reporting Information

Name: Steve Hsu

Dept/Branch: CDPH-RHB

Address: PO Box 99-7414 MS 7610

Telephone No.: 916-440-7946

Sample Information

System Name / Facility:

Sampling Point (s):

SONGS-B

System No.:

Billing Agency

☐ DWFOB ()☐ DWTPB☐ EMB☒ RHB☐ FDB☐ Other (Specify)☐ RWQCB ()☐ DWR☐ DTSC☐ CDFG

TYPE OF SAMPLE (Check all applicable boxes)

☐ Drinking Water☐ Groundwater☐ Surface Water☐ Wastewater☐ Raw☐ Water Treatment Plant (WTP)☐ Distribution System☐ Point of Use (POU)☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted☐ Air Filters

Date/Time

Finishing: _____

Starting: _____

Net (M³) _____☐ Air Charcoal Cartridge☒ Seawater☐ Milk☐ Wipes☐ Radon Canister☐ Sludge (Semi-solid Samples)☐ Soil/Sediment☐ Biota (Type): _____☐ Other: _____

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: _____☐ Field Measurement: _____ mR/hr☐ Rush/Priority (should be prearranged and have supervisory approval)

Cool/Frozen: _____

Other: _____

☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

☐ Gross Alpha☐ Total Uranium☐ Total Radium☐ Radium-226☐ Radium-228☐ Radon-222☐ Other (Specify): _____☐ Gross Beta☐ Total Beta (SC)☒ Tritium (³H)☐ Carbon-14☐ Iodine-131☐ Strontium-89, 90☐ Nickel-63☐ Gamma Scan☐ NORM (Gamma)☐ Isotopic Americium / Curium☐ Isotopic Plutonium☐ Isotopic Thorium☐ Isotopic Uranium☐ Iron-55

CHAIN OF CUSTODY

1. 8/15/12

Date

1235

Time Custody Received

Jenny Smith

Name (Print)

MBC

Organization

2.

Date

Time Custody Received

Name (Print)

Organization

3.

Date

Time Custody Received

Name (Print)

Organization

Signature

Signature

8/16/12

Date

1:00

Time Custody Released

Date

Time Custody Released

Date

Time Custody Released

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

☐ Acceptable☐ Holding Time Exceeded☐ Broken Container☐ Sample Not Cooled☐ Leaked in Transit☐ Insufficient Sample☐ Improper Container

B. Preservatives/Carriers:

☐ Added While Sampling☐ Added in Laboratory☐ Not Added☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0365

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / August 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0365-01	Sample ID: R 92153	Time Collected: 8/15/2012 12:28	Sampling Point: SONGS C	
	Sample Type: Seawater			
K-40	EPA 901.1	314 +/- 20.7	81.4	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 12-08-17-12	Lab No. (Leave Blank) 12-0365
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Date & Time Sampled 8/15/12 1228	Serial Number R 92153
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7140	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

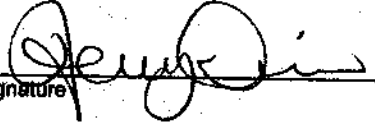
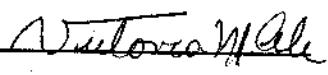
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Cooled/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---|--|---|--|
| 1. | Date
8/15/12
Time Custody Received
1228 | Name (Print)
Jenny Smith
Organization
MBC | Signature
 | Date
8/16/12
Time Custody Released
1200 |
| 2. | Date
Time Custody Received | Name (Print)
Organization | Signature | Date
Time Custody Released |
| 3. | Date
4-17-12
Time Custody Received
13:00 | Name (Print)
VIA
Organization
DWRIB | Signature
 | Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0366

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / August 2012			
System No:		Billing Agency: RHB	Samples Received by Lab: 8/17/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0366-01	Sample ID: R 92155 Sample Type: Seawater	Time Collected: 8/15/2012 12:28	Sampling Point: SONGS C	
Tritium	EPA 906.0	-171.0 +/- 149	262	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G184 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 8-17-12	Lab No. (Leave Blank) 12-0366
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 8/15/12 1228	Serial Number R 92155
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Date/Time _____ ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

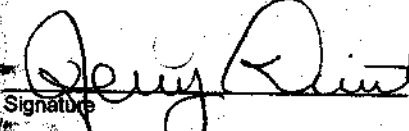
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--|--|---|--|
| 1. | Date
8/15/12
Time Custody Received
1228 | Name (Print)
Jenny Smith
Organization
MBC | Signature
 | Date
8/16/12
Time Custody Released
1200 |
| 2. | Date

Time Custody Received

Date

Time Custody Released
_____ | Name (Print)

Organization

Name (Print)

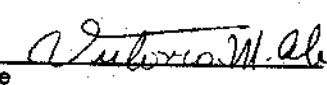
Organization
_____ | Signature

Signature
_____ | Date

Time Custody Released

Date

Time Custody Released
_____ |
| 3. | Date
8-17-12
Time Custody Received
13:00 | Name (Print)

Organization
DWR | Signature
 | Date

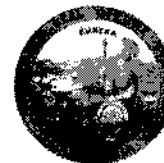
Time Custody Released
_____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: $\leq 0.01 \text{ mR/hr}$
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0367

Collector: Robert Moore	MBC	Requestor: Roger Lupo	RHB
	CA	CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / August 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0367-01	Sample ID: R 92158	Time Collected: 8/15/2012 14:35	Sampling Point: SONGS D	
	Sample Type: Seawater			
K-40	EPA 901.1	349 +/- 21.4	80.5	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 8-17-12	Lab No. (Leave Blank) 12-0367
Collector Information Name: Robert Moore Dept/Branch: MBC Applied Environmental Services Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 8/15/12 1435	Serial Number R 92158
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Reporting Information Name: Steve Hsu Dept/Branch: CDRH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters, _____ Date/Time _____
 Finishing: _____
 Starting: _____
 Net (M³): _____
☐ Air Charcoal Cartridge
- ☒ Seawater ☐ Sludge (Semi-solid Samples)
☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Cooled/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | | |
|----|---------------------------|------------------------------|---------------|-----------------|-------------------------------|
| 1. | Date
15 Aug 12
1435 | Name (Print)
Robert Moore | Signature
 | Date
8/16/12 | Time Custody Released
800 |
| 2. | Date
8/16/12 | Name (Print)
Jenny Smith | Signature
 | Date
8/16/12 | Time Custody Released
1700 |
| 3. | Date
8-17-12 | Name (Print)
DWRLB | Signature
 | Date | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 0.01 mR/hr
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0368

Collector: Robert Moore	MBC	Requestor: Roger Lupo	RHB
	CA	CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / August 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0368-01	Sample ID: R 92160 Sample Type: Seawater	Time Collected: 8/15/2012 14:35	Sampling Point: SONGS D	
Tritium	EPA 906.0	-106 +/- 150	262	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 8-17-12	Lab No. (Leave Blank) 12-0368
510-620-2930 Shiyamale Rubera		Date & Time Sampled 8/15/12 1435	Serial Number R 92160
Collector Information Name: Robert Moore Dept./Branch: MBC Applied Environmental Services Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--|---|------------------------|---|
| 1. | Date: 15 Aug 12
Time Custody Received: 1435 | Name (Print): Robert Moore
Organization: MBC | Signature: [Signature] | Date: 8/16/12
Time Custody Released: 800 |
| 2. | Date: 8/16/12
Time Custody Received: 800 | Name (Print): Jenny Smith
Organization: MBC | Signature: [Signature] | Date: 8/16/12
Time Custody Released: 1700 |
| 3. | Date: 8-17-12
Time Custody Received: 13:00 | Name (Print): [Blank]
Organization: DWRLB | Signature: [Signature] | Date: [Blank]
Time Custody Released: [Blank] |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0281

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / July 2012				
System No:	Billing Agency: RHB		Samples Received by Lab: 7/18/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0281-01	Sample ID: R 92126 Sample Type: Seawater	Time Collected: 7/16/2012 10:38	Sampling Point: SONGS A	
K-40	EPA 901.1	356 +/- 17.9	60.6	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 SIO - 620 - 2930 Attn: Stephanie Ruben		Date Received 7-18-12	Lab No. (Leave Blank) 12-0291
		Date & Time Sampled 7/16/12 1038	Serial Number R 92126
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Services Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: P.O. Box 99-7414 MS 7610 Sacramento, CA 95839 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: Sampling Point (s): SONGS System No.: A		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input checked="" type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing: _____ Date/Time: _____
Starting: _____
Net (M³) _____
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Copied/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|--|--|------------------------|--|
| 1. Date: 7/16/12
Time Custody Received: 1038 | Name (Print): Jenny Smith
Organization: MBC | Signature: [Signature] | Date: 7/17/12
Time Custody Released: 1700 |
| 2. Date: _____
Time Custody Received: _____ | Name (Print): _____
Organization: _____ | Signature: _____ | Date: _____
Time Custody Released: _____ |
| 3. Date: 7-16-12
Time Custody Received: 11:30 | Name (Print): VA
Organization: DWRLB | Signature: [Signature] | Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 4.001 MR/HR



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0282

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / July 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0282-01	Sample ID: R 92127	Time Collected: 7/16/2012 10:38	Sampling Point: SONGS A	
	Sample Type: Seawater			
Tritium	EPA 906.0	-94.2 +/- 151	262	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 7-18-12	Lab No. (Leave Blank) 12-0282
Date & Time Sampled 7/16/12 1038		Serial Number R 92127	
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4850		Reporting Information Name: Steve HSU Dept/Branch: CDPH -RHB Address: PO Box 99-7411 MS 7610 Sacramento, CA 95819 Telephone No.: 916-440-7140	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

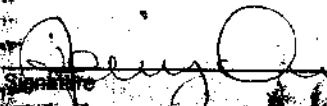

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Iced/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (TSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---------------------------------------|------------------------------------|---|--------------------------------------|
| 1. | Date
7/16/12 | Name (Print)
Jenny Smith | Signature
 | Date
7/17/12 |
| | Time Custody Received
1038 | Organization
MBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
7-18-12 | Name (Print)
UA | Signature
 | Date |
| | Time Custody Received
11:30 | Organization
DWRLB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0283

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / July 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0283-01	Sample ID: R 92130 Sample Type: Seawater	Time Collected: 7/16/2012 10:54	Sampling Point: SONGS B	
K-40	EPA 901.1	316 +/- 22.7	86.5	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Stephanie R. Rivera		Date Received 7-18-12	Lab No. (Leave Blank) 12-0282
		Date & Time Sampled 7/16/12 1054	Serial Number R 92130
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-890-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: P.O. Box 99-7414 MS 7610 Sacramento, CA 95879 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input checked="" type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Sed/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input checked="" type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (SC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|------------------------------|---------------------------|------------------------|------------------------------|
| 1. Date: 7/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 7/17/12 |
| Time Custody Received: 1054 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 2. Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. Date: 7-16-12 | Name (Print): VA | Signature: [Signature] | Date: _____ |
| Time Custody Received: 1130 | Organization: DWRLB | Signature: [Signature] | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|
- ≤ 0.01 MR/HR



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0284

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / July 2012				
System No:		Billing Agency: RHB		Samples Received by Lab:	7/18/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0284-01	Sample ID: R 92131 Sample Type: Seawater	Time Collected: 7/16/2012 10:54	Sampling Point: SONGS B	
Tritium	EPA 906.0	-76.5 +/- 151	262	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 <i>Alt. Emergency Release</i>		Date Received <i>7/16/12</i>	Lab No. (Leave Blank) <i>12-0284</i>
		Date & Time Sampled <i>7/16/12 1054</i>	Serial Number <i>R 92131</i>
Collector Information Name: <i>Jenny Smith</i> Dept./Branch: <i>MBC Applied Environmental Science</i> Address: <i>3000 Red Hill Ave. Costa Mesa, CA 92626</i> Telephone No.: <i>714-850-4830</i>		Reporting Information Name: <i>Steve HSU</i> Dept./Branch: <i>CDPH - RHB</i> Address: <i>PO Box 99-7414 MS 7610 Sacramento, CA 95899</i> Telephone No.: <i>916-440-7040</i>	
Sample Information System Name / Facility: <i>SONGS</i> Sampling Point (s): <i>B</i> System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Cooled/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | |
|-------------------------------------|----------------------------------|------------------------------------|
| 1. Date: <i>7/16/12</i> | Name (Print): <i>Jenny Smith</i> | Date: <i>7/17/12</i> |
| Time Custody Received: <i>1054</i> | Organization: <i>MBC</i> | Time Custody Released: <i>1700</i> |
| 2. Date: _____ | Name (Print): _____ | Date: _____ |
| Time Custody Received: _____ | Organization: _____ | Time Custody Released: _____ |
| 3. Date: <i>7/18/12</i> | Name (Print): <i>UA</i> | Date: _____ |
| Time Custody Received: <i>11:30</i> | Organization: <i>DWRLB</i> | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** *= 0.01 MR/HR*
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:**
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0285

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / July 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0285-01	Sample ID: R 92134	Time Collected: 7/16/2012 10:47	Sampling Point: SONGS C	
	Sample Type: Seawater			
K-40	EPA 901.1	364 +/- 20.9	79.0	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804

510-620-2911

510-620-2911

Attn: Shyamala Rudeen

Date Received

7-18-12

Lab No. (Leave Blank)

12-0285

Date & Time Sampled

7/16/12 1047

Serial Number

R 92134

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, CA 92626

Telephone No.: 714-850-9830

Sample Information

System Name / Facility:

Sampling Point (s):

SONGS
C

System No.:

Reporting Information

Name: Steve Hsu

Dept./Branch: CDPH RHB

Address: PO Box 7414 MS 7610

Sacramento, CA 95879

Telephone No.: 916-440-7940

Billing Agency

- ☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89/90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 7/16/12 Name (Print): Jenny Smith
 Time Custody Received: 1047 Organization: MBC
 Signature: _____
 Date: 7/17/12
 Time Custody Released: 1700
 2. Date: _____ Name (Print): _____
 Time Custody Received: _____ Organization: _____
 Signature: _____
 Date: _____
 Time Custody Released: _____
 3. Date: 7-18-12 Name (Print): VN
 Time Custody Received: 11:30 Organization: DURLB
 Signature: _____
 Date: _____
 Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: **CODI NR/HR**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
 B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0286

Collector: Jenny Smith MBC Applied Environmental Science, 300 Costa Mesa CA 92626 Phone Number: 714-850-4830	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / July 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0286-01	Sample ID: R 92135 Sample Type: Seawater	Time Collected: 7/16/2012 10:47	Sampling Point: SONGS C	
Tritium	EPA 906.0	15.7 +/- 153.0	262.0	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Allen Smithville Kildan		Date Received 7-18-12	Lab No. (Leave Blank) 12-0286
		Date & Time Sampled 7/16/12 1047	Serial Number R 92135
Collector Information Name: Jenny Smith Dept./Branch: ABC Applied Environmental Services Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 91-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Radionuclide(s), if known: _____
☐ Other: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-------------------------|------------------------------------|--------------------|-------------------------|
| 1. | Date
7/16/12
1047 | Name (Print)
Jenny Smith
ABC | Signature
 | Date
7/17/12
1700 |
| 2. | Date
_____ | Name (Print)
_____ | Signature
_____ | Date
_____ |
| 3. | Date
7-18-12
1130 | Name (Print)
JH
DWRB | Signature
 | Date
_____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- = 0.01 uR/hr



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0287

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / July 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0287-01	Sample ID: R 92137	Time Collected: 7/16/2012 12:15	Sampling Point: SONGS D	
	Sample Type: Seawater			
K-40	EPA 901.1	318 +/- 19.9	74.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 (510-620-2930) Alt: Shipmate Radio		Date Received 7-18-12 Date & Time Sampled 7/16/12 1215	Lab No. (Leave Blank) 12-0287 Serial Number R 92137
Collector Information Name: Robert Moore Dept./Branch: MBC Applied Environmental Services Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - R413 Address: PO Box 99-7414-MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input checked="" type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|--|---|---------------------------------|---|
| 1. <u>16 July 12</u>
Date
<u>1215</u>
Time Custody Received | <u>Robert Moore</u>
Name (Print)
<u>MBC</u>
Organization | <u>Robert Hsu</u>
Signature | <u>16 July 12</u>
Date
<u>1430</u>
Time Custody Released |
| 2. <u>7/16/12</u>
Date
<u>1430</u>
Time Custody Received | <u>Jenny Smith</u>
Name (Print)
<u>MBC</u>
Organization | <u>[Signature]</u>
Signature | <u>7/17/12</u>
Date
<u>1700</u>
Time Custody Released |
| 3. <u>7-18-12</u>
Date
<u>11:30</u>
Time Custody Received | <u>UA</u>
Name (Print)
<u>DWRLB</u>
Organization | <u>[Signature]</u>
Signature |
Date

Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** ≈ 0.01 MR/HR
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:**
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0288

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / July 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0288-01	Sample ID: R 92143	Time Collected: 7/16/2012 12:15	Sampling Point: SONGS D	
	Sample Type: Seawater			
Tritium	EPA 906.0	-13.7 +/- 153	262	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water. EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 7-18-12	Lab No. (Leave Blank) 12-0288
Date & Time Sampled 7/16/12 1215		Serial Number R 92143	
Collector Information Name: Robert Moore Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Cooled/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (ESC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (3H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|---------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|
| 1. <u>16 July 12</u>
Date | <u>Robert Moore</u>
Name (Print) | <u>Robert Moore</u>
Signature | <u>16 July 12</u>
Date |
| <u>1215</u>
Time Custody Received | <u>MBC</u>
Organization | | <u>1430</u>
Time Custody Released |
| 2. <u>7/16/12</u>
Date | <u>Jenny Smith</u>
Name (Print) | <u>Jenny Smith</u>
Signature | <u>7/17/12</u>
Date |
| <u>1430</u>
Time Custody Received | <u>MBC</u>
Organization | | <u>1700</u>
Time Custody Released |
| 3. <u>7-18-12</u>
Date | <u>UA</u>
Name (Print) | <u>Victoria M. Ole</u>
Signature |
Date |
| <u>11:30</u>
Time Custody Received | <u>DWRB</u>
Organization | |
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 MR/HR**



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0211

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / June 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0211-01	Sample ID: R 92048	Time Collected: 6/18/2012 10:52	Sampling Point: SONGS A	
	Sample Type: Seawater			
K-40	EPA 901.1	369 +/- 23.1	83.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Snnyamake Rubera		Date Received 6/20/12	Lab No. (Leave Blank) 12-0211
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Address: 3000 Red Hill Ave. Costa Mesa 92626 Telephone No.: 714-850-4830		Date & Time Sampled 6/18/12 1052	Serial Number R 92048
Sample Information System Name / Facility: Sampling Point (s): System No.:		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
SONGS A		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

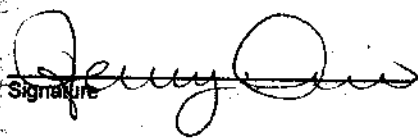
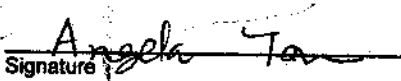
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|----------------------------------|-----------------------------|---|-------------------------------|
| 1. | Date
6/18/12 | Name (Print)
Jenny Smith | Signature
 | Date
6/19/12 |
| | Time Custody Received
1052 | Organization
MBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
6/20/12 | Name (Print)
A. TAN | Signature
 | Date |
| | Time Custody Received
6/20/12 | Organization
DWRLB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
40. DIMR/HR



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0212

Collector:	Jenny Smith	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Science, 300			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number:	714-850-4830		Phone Number:	916-440-7955
Site/Project Name:	San Onofre NPP / June 2012				
System No:	Billing Agency: RHB		Samples Received by Lab: 6/20/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0212-01	Sample ID: R 92049	Time Collected: 6/18/2012 10:52	Sampling Point: SONGS A	
	Sample Type: Seawater			
Tritium	EPA 906.0	-21.1 +/- 156	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 6/20/12	Lab No. (Leave Blank) 12-0212
510-620-2930 Attn: Shyamalie Rubera		Date & Time Sampled 6/18/12 1052	Serial Number R 92049
Collector Information Name: Jenny Smith Dept/Branch: NBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7010 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: Sampling Point (s): SONGS System No.: A		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☒ Milk ☐ Soil/Sediment
 Starting: _____
☒ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☒ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------------|-----------------------------|---------------|-------------------------------|
| 1. | Date
6/18/12 | Name (Print)
Jenny Smith | Signature
 | Date
6/19/12 |
| | Time Custody Received
1052 | Organization
NBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
6/20/12 | Name (Print)
A. TAN | Signature
 | Date |
| | Time Custody Received
10:10 | Organization
DWRLB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- < 0.01 MR/hr.



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0213

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / June 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0213-01	Sample ID: R 92050	Time Collected: 6/18/2012 11:10	Sampling Point: SONGS B	
	Sample Type: Seawater			
K-40	EPA 901.1	348 +/- 21.6	81.9	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 6/20/12	Lab No. (Leave Blank) 12-0213
510-620-2930 Attn: Shiyamalie Rubera		Date & Time Sampled 6/18/12 1110	Serial Number R 92050
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

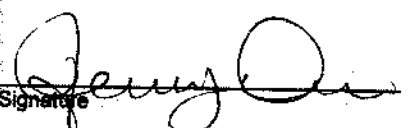
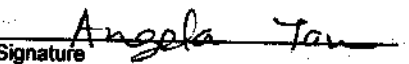
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☒ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (ESC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------------|-----------------------------|---|-------------------------------|
| 1. | Date
6/18/12 | Name (Print)
Jenny Smith | Signature
 | Date
6/19/12 |
| | Time Custody Received
1110 | Organization
MBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
6/20/12 | Name (Print)
A. TAN | Signature
 | Date |
| | Time Custody Received
12:10 | Organization
DWRB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☒ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 40.01MR/hr



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0214

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / June 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0214-01	Sample ID: R 92052	Time Collected: 6/18/2012 11:10	Sampling Point: SONGS B	
	Sample Type: Seawater			
Tritium	EPA 906.0	29.2 +/- 157	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamake Rubera		Date Received 6/20/12	Lab No. (Leave Blank) 12-0214
		Date & Time Sampled 6/18/12 1110	Serial Number R 92052
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept/Branch: CDPH-RHB Address: PO Box 97-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-146-1440	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

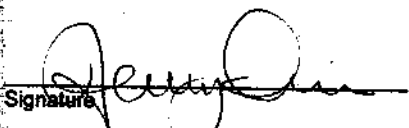
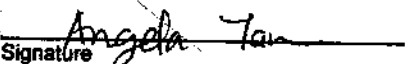
COMMENTS: (Cautions, etc.):

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____ | <input type="checkbox"/> Cold/Frozen: _____ | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Field Measurement: _____ mR/hr | <input type="checkbox"/> Radionuclide(s), if known: _____ | |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) | | |

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

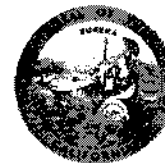
- | | | | |
|--|--|---|--|
| 1. Date
6/18/12
Time Custody Received
1110 | Name (Print)
Jenny Smith
Organization
MBC | Signature
 | Date
6/19/12
Time Custody Released
1700 |
| 2. Date
Time Custody Received | Name (Print)
Organization | Signature | Date
Time Custody Released |
| 3. Date
6/20/12
Time Custody Received
12:10 | Name (Print)
A. TAN
Organization
DWR/B | Signature
 | Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- | | | | |
|--|--|--|---|
| A. Condition at Time of Receipt: | | | |
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
| B. Preservatives/Carriers: | | | |
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0215

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / June 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0215-01	Sample ID: R 92060	Time Collected: 6/18/2012 11:01	Sampling Point: SONGS C	
	Sample Type: Seawater			
K-40	EPA 901.1	400 +/- 21.9	81.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804

510-620-2911

Date Received

Lab No. (Leave Blank)

6/20/12

12-0215

Date & Time Sampled

Serial Number

6/18/12 1101

R 92060

Collector Information

Name: Jenny Smith

Dept./Branch: MBC Applied Environmental Sciences

Address: 3000 Red Hill Ave. Costa Mesa, CA 92626

Telephone No.: 714-4850-4830

Reporting Information

Name: Steve HSU

Dept./Branch: CDPH-RHB

Address: PO Box 99-744 MS 7010

Sacramento, CA 95819

Telephone No.: 916-440-7940

Sample Information

System Name / Facility:

Sampling Point (s):

SONGS

C

Billing Agency

☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

System No.:

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing: _____ Date/Time: _____
Starting: _____
Net (M³): _____
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☒ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 6/18/12 Name (Print): Jenny Smith
Time Custody Received: 1101 Organization: MBC
Signature: _____
2. Date: _____ Name (Print): _____
Time Custody Received: _____ Organization: _____
Signature: _____
3. Date: 6/20/12 Name (Print): A. TAN
Time Custody Received: 12:14 Organization: DWFB
Signature: Angela Tan
- Date: 6/19/12
Time Custody Released: 1700
Date: _____
Time Custody Released: _____
Date: _____
Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable

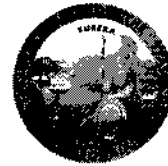


State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0216

Collector: Jenny Smith	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Science, 300		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / June 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0216-01	Sample ID: R 92061 Sample Type: Seawater	Time Collected: 6/18/2012 11:01	Sampling Point: SONGS C	
Tritium	EPA 906.0	-102 +/- 154	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Smyamalie Robera		Date Received 6/20/12	Lab No. (Leave Blank) 12-0346
		Date & Time Sampled 6/18/12 1101	Serial Number R 92061
Collector Information Name: Jenny Smith Dept/Branch: MSC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7110	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | |
|--|--|--|
| 1. Date: 6/18/12
Time Custody Received: 1101 | Name (Print): Jenny Smith
Organization: MSC | Signature: [Signature]
Date: 6/19/12
Time Custody Released: 1700 |
| 2. Date: _____
Time Custody Received: _____ | Name (Print): _____
Organization: _____ | Signature: _____
Date: _____
Time Custody Released: _____ |
| 3. Date: 6/20/12
Time Custody Received: 12:40 | Name (Print): A. TANK
Organization: DWR/RHB | Signature: [Signature]
Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0217

Collector: Robert Moore	MBC	Requestor: Roger Lupo	RHB
	CA	CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / June 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0217-01	Sample ID: R 92062 Sample Type: Seawater	Time Collected: 6/18/2012 12:45	Sampling Point: SONGS D	
K-40	EPA 901.1	363 +/- 18.1	61.1	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 6/20/12	Lab No. (Leave Blank) 12-0217
Address: 510-620-2930 Alt: Shiyamala, Robera		Date & Time Sampled 6/18/12 1245	Serial Number R 92062
Collector Information Name: Robert Moore Dept/Branch: MSC Applied Environmental Science Address: 3200 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-1414 MS 7010 Sacramento, CA 95899 Telephone No.: 916-440-1940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Cooled/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LS) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|----------------------------|------------------------|------------------------------|
| 1. | Date: 6/18/12 | Name (Print): Robert Moore | Signature: [Signature] | Date: 6/18/12 |
| | Time Custody Received: 1245 | Organization: MSC | | Date: 1430 |
| 2. | Date: 6/18/12 | Name (Print): Jenna Smith | Signature: [Signature] | Date: 6/19/12 |
| | Time Custody Received: 1430 | Organization: MSC | | Date: 1700 |
| 3. | Date: 6/20/12 | Name (Print): A. TAN | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 12:10 | Organization: DW/RUB | Signature: Angela Tan | Date: _____ |
| | | | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 40.0 MR/hr



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0218

Collector: Robert Moore	MBC	Requestor: Roger Lupo	RHB
	CA	CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / June 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/20/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0218-01	Sample ID: R 92063 Sample Type: Seawater	Time Collected: 6/18/2012 12:45	Sampling Point: SONGS D	
Tritium	EPA 906.0	-95.6 +/- 154	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Roberts		Date Received 6/20/12	Lab No. (Leave Blank) 12-0218
Collector Information Name: R. Robert M. Moore Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-830-4830		Date & Time Sampled 6/18/12 1245	Serial Number R 92063
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 91-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7740	
Billing Agency		<input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters, _____ Date/Time _____
Finishing: _____
Starting: _____
Net (M³) _____
☐ Air Charcoal Cartridge
- ☒ Seawater ☐ Sludge (Semi-solid Samples)
☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Lead/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (BSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|---|---|---------------------------------|--|
| 1. Date
6/18/12
Time Custody Received
1245 | Name (Print)
R. Robert M. Moore
Organization
MBC | Signature
<i>[Signature]</i> | Date
6/18/12
Time Custody Released
1430 |
| 2. Date
6/18/12
Time Custody Received
1430 | Name (Print)
Kenny Smith
Organization
MBC | Signature
<i>[Signature]</i> | Date
6/19/12
Time Custody Released
1700 |
| 3. Date
6/20/12
Time Custody Received
1245 | Name (Print)
A. TAN
Organization
DWR/B | Signature
Angela Tan | Date

Time Custody Released
_____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0127

Collector: Wayne Dossett MBC Applied Environmental Sciences, 30 Costa Mesa CA 92626 Phone Number: 714-850-4830	Requestor: Steve Hsu 1500 Capitol Avenue, MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7940
Site/Project Name: San Onofre NPP / May 2012	
System No:	Billing Agency: Samples Received by Lab: 5/17/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0127-01	Sample ID: R 92000 Sample Type: Seawater	Time Collected: 5/15/2012 10:52	Sampling Point: SONGS A	
K-40	EPA 901.1	357 +/- 17.6	58.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shiyamalie Rubera		Date Received 5/17/12	Lab No. (Leave Blank) 12-0127 12-0124
Date & Time Sampled 5/15/12 1052		Serial Number R 92000	
Collector Information Name: Wayne Dossett Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95819 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³): _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-----------------------------|-----------------------------|------------------------|------------------------------|
| 1. | Date: 5/15/12 | Name (Print): Wayne Dossett | Signature: [Signature] | Date: 5/15/12 |
| | Time Custody Received: 1052 | Organization: MBC | | Time Custody Released: 1400 |
| 2. | Date: 15 May 12 | Name (Print): Robert Moore | Signature: [Signature] | Date: 16 May 12 |
| | Time Custody Received: 1400 | Organization: MBC | | Time Custody Released: 1600 |
| 3. | Date: 5/17/12 | Name (Print): A TAN | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 1330 | Organization: DWR/LB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Containers:**
☐ Added While _____ ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 0.01 MPA/hr



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0239

Collector: Jenny Macartney 2156 Sierra Way San Luis Obispo CA 93406 Phone Number: 805-781-5554	SLO County Environmental	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: San Onofre NPP / May 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 5/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0239-01	Sample ID: R 92002 Sample Type: Seawater	Time Collected: 5/15/2012 10:52	Sampling Point: SONGS A	
Tritium	EPA 906.0	-89.6 +/- 154	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 5/17/12	Lab No. (Leave Blank) 12-017 12-0239
510-620-2930 Attn: Stephanie Resbera		Date & Time Sampled 5/15/12 1052	Serial Number R 92002
Collector Information Name: Wayne Dossett Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 91-7417 MS 7610 Sacramento, CA 95831 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|-----------------------------|------------------------|------------------------------|
| 1. | Date: 5/15/12 | Name (Print): Wayne Dossett | Signature: [Signature] | Date: 5/15/12 |
| | Time Custody Received: 1052 | Organization: MBC | | Time Custody Released: 1400 |
| 2. | Date: 15 May 12 | Name (Print): Robert Hsu | Signature: [Signature] | Date: 16 May 12 |
| | Time Custody Received: 1400 | Organization: MBC | | Time Custody Released: 1400 |
| 3. | Date: 5/17/12 | Name (Print): A. TAN | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 14:00 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☒ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 40.01 M/R/hr



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0131

Collector: Wayne Dossett	RHB	Requestor: Steve Hsu	RHB
MBC Applied Environmental Sciences, 30		1500 Capitol Avenue, MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7940	
Site/Project Name: San Onofre NPP / May 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 5/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0131-01	Sample ID: R 92004 Sample Type: Seawater	Time Collected: 5/15/2012 11:05	Sampling Point: SONGS B	
K-40	EPA 901.1	340 +/- 21.0	79.2	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 5/17/12	Lab No. (Leave Blank) 12-0131
510-620-2930 Attn: Shyamrube Rubera		Date & Time Sampled 5/15/12 1105	Serial Number R 92004
Collector Information Name: Wayne Dossett Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Heu Dept./Branch: CDPH - R4B Address: PO Box 97-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-----------------------------|-----------------------------|------------------------|------------------------------|
| 1. | Date: 5/15/12 | Name (Print): Wayne Dossett | Signature: [Signature] | Date: 5/15/12 |
| | Time Custody Received: 1105 | Organization: MBC | | Time Custody Released: 1400 |
| 2. | Date: 5/15/12 | Name (Print): Robert Moore | Signature: [Signature] | Date: 16 May 12 |
| | Time Custody Received: 1400 | Organization: MBC | | Time Custody Released: 1600 |
| 3. | Date: 5/17/12 | Name (Print): A. TAN | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 1330 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- < 0.01 MR/hr



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0132

Collector:	Wayne Dossett	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Sciences, 30			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number:	714-850-4830		Phone Number:	916-440-7955
Site/Project Name:	San Onofre NPP / May 2012				
System No:		Billing Agency: RHB		Samples Received by Lab:	5/17/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0132-01	Sample ID: R 92006 Sample Type: Seawater	Time Collected: 5/15/2012 11:05	Sampling Point: SONGS B	
Tritium	EPA 906.0	-164 +/- 152	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shrinimala Ruben		Date Received 5/17/12	Lab No. (Leave Blank) 12-0132
Collector Information Name: Wayne Doss Dept./Branch: MBC Applied Environmental Services Address: 3200 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 5/15/12 1105	Serial Number R 92006
Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-744 MS 7010 Sacramento, CA 95833 Telephone No.: 916-440-7940			
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input checked="" type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> All Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____ | <input type="checkbox"/> Ice/Frozen: _____ | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Field Measurement: _____ mR/hr | <input type="checkbox"/> Radionuclide(s), if known: _____ | |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) | | |

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (50) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (^3H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|-------------------------------|----------------------------|------------------------------|
| 1. | Date: 5/15/12 | Name (Print): Wayne Doss | Signature: Wayne Doss | Date: 5/15/12 |
| | Time Custody Received: 1105 | Organization: MBC | Signature: _____ | Time Custody Released: 1400 |
| 2. | Date: 15 May 12 | Name (Print): Robert M. _____ | Signature: Robert M. _____ | Date: 16 May 12 |
| | Time Custody Received: 1400 | Organization: MBC | Signature: _____ | Time Custody Released: 1600 |
| 3. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- | | | | |
|--|--|--|---|
| A. Condition at Time of Receipt: | | | |
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
| B. Preservatives/Carriers: | | | |
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0133

Collector: Wayne Dossett	RHB	Requestor: Steve Hsu	RHB
MBC Applied Environmental Sciences, 30		1500 Capitol Avenue, MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7940	
Site/Project Name: San Onofre NPP / May 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 5/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0133-01	Sample ID: R 92008	Time Collected: 5/15/2012 10:59	Sampling Point: SONGS C	
	Sample Type: Seawater			
K-40	EPA 901.1	376 +/- 21.9	83.8	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 5/17/12	Lab No. (Leave Blank) 12-0133
510-620-2930 Attn: Shyamalie Robern		Date & Time Sampled 5/15/12 1059	Serial Number R 92008
Collector Information Name: Wayne Dosselt Dept./Branch: MBC Applied Environmental Sciences Address: 3200 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95877 Telephone No.: 916-440-7740	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☒ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Red/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (TSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-----------------------------|-----------------------------|--------------------------|------------------------------|
| 1. | Date: 5/15/12 | Name (Print): Wayne Dosselt | Signature: Wayne Dosselt | Date: 5/15/12 |
| | Time Custody Received: 1059 | Organization: MBC | | Time Custody Released: 1400 |
| 2. | Date: 15 May 12 | Name (Print): Robert Moore | Signature: Robert Moore | Date: 16 May 12 |
| | Time Custody Received: 1400 | Organization: MBC | | Time Custody Released: 1600 |
| 3. | Date: 5/17/12 | Name (Print): A. TAN | Signature: Angela Tan | Date: _____ |
| | Time Custody Received: 1230 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- <0.01 MR/hr



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0134

Collector: Wayne Dossett	RHB	Requestor: Roger Lupo	RHB
MBC Applied Environmental Sciences, 30		CDPH - RHB, 1500 Capitol Av., MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / May 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 5/17/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0134-01	Sample ID: R 92009 Sample Type: Seawater	Time Collected: 5/15/2012 10:59	Sampling Point: SONGS C	
Tritium	EPA 906.0	-93.6 +/- 154	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 5/17/12	Lab No. (Leave Blank) 12-0134
Atn: Shingirulie Rubera 510-620-2930		Date & Time Sampled 5/15/12 1059	Serial Number R 92009
Collector Information Name: Wayne Dosssett Dept/Branch: NBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RHB Address: PO Box 97-7414 MS 7610 Sacramento, CA 95871 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Shipping Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
 Starting: _____
 Net (M³): _____
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LS) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (H³) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|----|--|---|--|
| 1. | Date: 5/15/12
Time Custody Received: 1059 | Name (Print): Wayne Dosssett
Organization: NBC
Signature: [Signature] | Date: 5/15/12
Time Custody Released: 1400 |
| 2. | Date: 15 May 12
Time Custody Received: 1400 | Name (Print): Robert Moore
Organization: NBC
Signature: [Signature] | Date: 16 May 12
Time Custody Released: 1600 |
| 3. | Date: 5/17/12
Time Custody Received: 1330 | Name (Print): A TAN
Organization: DWRLB
Signature: [Signature] | Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0135

Collector:	Wayne Dossett	RHB	Requestor:	Steve Hsu	RHB
	MBC Applied Environmental Sciences, 30			1500 Capitol Avenue, MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7940	
Site/Project Name:	San Onofre NPP / May 2012				
System No:	Billing Agency: RHB		Samples Received by Lab: 5/17/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0135-01	Sample ID: R 92011	Time Collected: 5/15/2012 10:25	Sampling Point: SONGS D	
	Sample Type: Seawater			
K-40	EPA 901.1	365 +/- 22.8	82.8	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shyamala Rubera		Date Received 5/17/12	Lab No. (Leave Blank) 12-0135
		Date & Time Sampled 5/15/12 1025	Serial Number R 92011
Collector Information Name: James Nuñez Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-250-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7010 Sacramento, CA 95877 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³): _____
☒ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Field/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-----------------------------|----------------------------|------------------------|------------------------------|
| 1. | Date: 5/15/12 | Name (Print): James Nuñez | Signature: [Signature] | Date: 5/15/12 |
| | Time Custody Received: 1025 | Organization: MBC | | Time Custody Released: 1400 |
| 2. | Date: 5/15/12 | Name (Print): Robert Moore | Signature: [Signature] | Date: 16 May 12 |
| | Time Custody Received: 1400 | Organization: MAC | | Time Custody Released: 1600 |
| 3. | Date: 5/17/12 | Name (Print): A. TAN | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 1330 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- <0.01 MR/hr



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0136

Collector:	Wayne Dossett	RHB	Requestor:	Roger Lupo	RHB
	MBC Applied Environmental Sciences, 30			CDPH - RHB, 1500 Capitol Av., MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number: 714-850-4830			Phone Number: 916-440-7955	
Site/Project Name:	San Onofre NPP / May 2012				
System No:		Billing Agency: RHB		Samples Received by Lab:	5/17/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0136-01	Sample ID: R 92014	Time Collected: 5/15/2012 10:25	Sampling Point: SONGS D	
	Sample Type: Seawater			
Tritium	EPA 906.0	-87.6 +/- 154	267	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Chiyamalle Ribera		Date Received 5/17/12	Lab No. (Leave Blank) 10-0186
Date & Time Sampled 5/15/12 1025		Serial Number R 92014	
Collector Information Name: James Nuñez Dept/Branch: MBC Applied Environmental Sci Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³): _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|----------------------------|------------------------|-----------------------------|
| 1. | Date: 5/15/12 | Name (Print): James Nuñez | Signature: [Signature] | Date: 5/15/12 |
| | Time Custody Received: 1025 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1400 |
| 2. | Date: 16 May 12 | Name (Print): Robert Moore | Signature: [Signature] | Date: 16 May 12 |
| | Time Custody Received: 1400 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1600 |
| 3. | Date: 5/17/12 | Name (Print): A. TAN | Signature: [Signature] | Date: 5/17/12 |
| | Time Custody Received: 13:28 | Organization: DWRLB | Signature: [Signature] | Time Custody Released: 1600 |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0062

Collector:	Wayne Dossett	RHB	Requestor:	Steve Hsu	RHB
	MBC Applied Environmental Sciences, 30			1500 Capitol Avenue, MS 7610	
	Costa Mesa	CA 92626		Sacramento	CA 95814-5006
	Phone Number:	714-850-4830		Phone Number:	916-440-7940
Site/Project Name:	San Onofre NPP / April 2012				
System No:	Billing Agency: RHB		Samples Received by Lab: 4/18/2012		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0062-01	Sample ID: R 91957 Sample Type: Seawater	Time Collected: 4/16/2012 11:20	Sampling Point: SONGS D	
Tritium	EPA 906.0	20.4 +/- 166.4	284.4	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shiyumathu Robert		Date Received 4-18-12	Lab No. (Leave Blank) 12-0062
		Date & Time Sampled 4/16/12 1120	Serial Number R 91957
Collector Information Name: Wayne Dossett Dept./Branch: MBC Applied Environmental Science Address: 3020 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- | | | |
|--|---|---|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____ | <input type="checkbox"/> Field Measurement: _____ mR/hr | <input type="checkbox"/> Radionuclide(s), if known: _____ |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) | | |

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|--|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input checked="" type="checkbox"/> Total Radium | <input type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

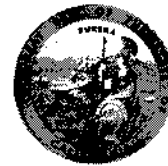
1. Date: 4/16/12	Name (Print): Wayne Dossett	Signature: [Signature]	Date: 4/16/12
Time Custody Received: 1120	Organization: MBC	Signature: [Signature]	Time Custody Released: 1800
2. Date: 4/16/12	Name (Print): Jenny S...	Signature: [Signature]	Date: 4/17/12
Time Custody Received: 1800	Organization: MBC	Signature: [Signature]	Time Custody Released: 1700
3. Date: 4-18-12	Name (Print): UA	Signature: [Signature]	Date: _____
Time Custody Received: 10:00	Organization: DWR/RHB	Signature: [Signature]	Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- | | | | |
|--|---|--|---|
| A. Condition at Time of Receipt: | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Sample Not Collected | <input type="checkbox"/> Insufficient Sample | |
| <input type="checkbox"/> Holding Time Exceeded | | | |
| B. Preservatives/Carriers: | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
| <input type="checkbox"/> Added While Sampling | | | |



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0061

Collector: Jenny Smith	RHB	Requestor: Steve Hsu	RHB
MBC Applied Environmental Science, 3000		1500 Capitol Avenue, MS 7610	
Costa Mesa, CA		Sacramento, CA	95814-5006
Phone Number:		Phone Number: 916-440-7940	
Site/Project Name: SONPP / April 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0061-01	Sample ID: R 91955	Time Collected: 4/16/2012 11:20	Sampling Point: SONGS D	
	Sample Type: Seawater			
K-40	EPA 901.1	303 +/- 20.3	78.3	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shyamala Kulkarni		Date Received 4-18-12	Lab No. (Leave Blank) 12-006
		Date & Time Sampled 4/16/12 1120	Serial Number R 91955
Collector Information Name: Wayne Dossett Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
 Starting: _____
 Net (M³) _____
☐ Air Charcoal Cartridge ☒ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☒ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Radionuclide(s), if known: _____
☐ Other: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------------|-----------------------------------|----------------------------------|-----------------------------------|
| 1. | Date 4/16/12 | Name (Print) Wayne Dossett | Signature Wayne Dossett | Date 4/16/12 |
| | Time Custody Received 1120 | Organization MBC | | Time Custody Released 1800 |
| 2. | Date 4/16/12 | Name (Print) Jenny Smith | Signature Jenny Smith | Date 4/17/12 |
| | Time Custody Received 1800 | Organization MBC | | Time Custody Released 1700 |
| 3. | Date 4-18-12 | Name (Print) VA | Signature Valerie M. Cole | Date _____ |
| | Time Custody Received 10:00 | Organization DWRLB | | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- = 0.01 MR/HR



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0060

Collector: Jenny Smith	RHB	Requestor: Steve Hsu	RHB
MBC Applied Environmental Science, 300		1500 Capitol Avenue, MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7940	
Site/Project Name: San Onofre NPP / April 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0060-01	Sample ID: R 91953 Sample Type: Seawater	Time Collected: 4/16/2012 15:30	Sampling Point: SONGS C	
Tritium	EPA 906.0	-32.7 +/- 165.1	284.4	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2911 Attn: Shyamalie Rubcia		Date Received 4-18-12	Lab No. (Leave Blank) 12-0046
		Date & Time Sampled 4/16/12 1530	Serial Number R 91953
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7640 Sacramento, Ca 95899 Telephone No.: 916-440-7440	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluorinated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
 Starting: _____
 Net (M³) _____
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date 4/16/12 Time Custody Received 1530	Name (Print) Jenny Smith Organization MBC	Signature 	Date 4/17/12 Time Custody Released 1700
2. Date 4/16/12 Time Custody Received 10:00	Name (Print) JA Organization DWRLB	Signature 	Date _____ Time Custody Released _____
3. Date 4/16/12 Time Custody Received 10:00	Name (Print) _____ Organization _____ Signature 	Signature 	Date _____ Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 0.01 MR/HR



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0059

Collector: Jenny Smith MBC Applied Environmental Science, 3000 Costa Mesa CA Phone Number:	RHB	Requestor: Steve Hsu 1500 Capitol Avenue, MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7940	RHB
Site/Project Name: San Onofre NPP / April 2012			
System No:		Billing Agency: RHB	Samples Received by Lab: 4/18/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0059-01	Sample ID: R 91952 Sample Type: Seawater	Time Collected: 4/16/2012 15:30	Sampling Point: SONGS C	
K-40	EPA 901.1	344 +/- 18.5	64.9	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 4-18-12	Lab No. (Leave Blank) 12-0059
510-620-2911 Attn: Shyanalie Hubera		Date & Time Sampled 4/16/12 1530	Serial Number R 91952
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

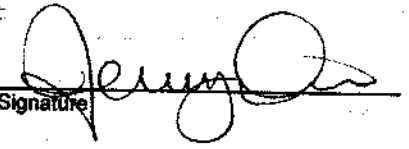
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Iced/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---------------------------------------|------------------------------------|---|--------------------------------------|
| 1. | Date
4/16/12 | Name (Print)
Jenny Smith | Signature
 | Date
4/17/12 |
| | Time Custody Received
1530 | Organization
MBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
4-18-12 | Name (Print)
VA | Signature | Date |
| | Time Custody Received
10:00 | Organization
DWR/LB | Signature | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 4-0.01 MR/HR**



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0058

Collector: Jenny Smith	RHB	Requestor: Steve Hsu	RHB
MBC Applied Environmental Science, 300		1500 Capitol Avenue, MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7940	
Site/Project Name: San Onofre NPP / April 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0058-01	Sample ID: R 91946	Time Collected: 4/16/2012 15:20	Sampling Point: SONGS B	
	Sample Type: Seawater			
Tritium	EPA 906.0	-138.9 +/- 162.6	284.4	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shyfraine Rubera		Date Received 4-18-12	Lab No. (Leave Blank) 12-0056
		Date & Time Sampled 4/16/12 1520	Serial Number R 91946
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Services Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve HSU Dept/Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-1940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
- ☐ Field Measurement: _____ mR/hr
- ☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____ Other: _____
- ☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (SC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input checked="" type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

1. Date: 4/16/12 Time Custody Received: 1520	Name (Print): Jenny Smith Organization: MBC	Signature: [Signature]	Date: 4/17/12 Time Custody Released: 1700
2. Date: _____ Time Custody Received: _____	Name (Print): _____ Organization: _____	Signature: _____	Date: _____ Time Custody Released: _____
3. Date: 4-18-12 Time Custody Received: 10:00	Name (Print): VA Organization: DWRLB	Signature: [Signature]	Date: _____ Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency
California Department of Public Health



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0057

Collector: Jenny Smith MBC Applied Environmental Science, 3000 Costa Mesa CA Phone Number:	RHB	Requestor: Steve Hsu 1500 Capitol Avenue, MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7940	RHB
Site/Project Name: San Onofre NPP / April 2012			
System No:	Billing Agency: RHB	Samples Received by Lab:	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0057-01	Sample ID: R 91945 Sample Type: Seawater	Time Collected: 4/16/2012 15:20	Sampling Point: SONGS B	
K-40	EPA 901.1	362 +/- 21.1	78.0	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch

850 Marina Bay Parkway, G164

Richmond, CA 94804

510-620-2911

510-620-29130

Attn: Shyamal Kuberan

Date Received

4-18-12

Lab No. (Leave Blank)

12-0057

Date & Time Sampled

4/16/12 1520

Serial Number

R 91945

Collector Information

Name: Jenny Smith

Dept/Branch: MBC Applied Environmental Science

Address: 3000 Red Hill Ave. Costa Mesa, Ca

92626

Telephone No.: 714-850-4830

Reporting Information

Name: Steve Hsu

Dept/Branch: CDPH-RHB

Address: PO Box 99-7414 MS 7610

Sacramento, Ca 95899

Telephone No.: 916-440-7940

Sample Information

System Name / Facility:

SONGS

Sampling Point (s):

B

System No.:

Billing Agency

- ☐ DWFOB () ☒ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☒ Milk ☐ Soil/Sediment
 Starting: _____
☒ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☒ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
☐ Rad/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|---------------------------|------------------------|------------------------------|
| 1. | Date: 4/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 4/17/12 |
| | Time Custody Received: 1520 | Organization: MBC | | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | | Time Custody Released: _____ |
| 3. | Date: 4-16-12 | Name (Print): VA | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 10:00 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: = 0.05 MR/HR
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
- ☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers: LY
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0056

Collector: Jenny Smith	RHB	Requestor: Steve Hsu	RHB
MBC Applied Environmental Science, 300		1500 Capitol Avenue, MS 7610	
Costa Mesa CA 92626		Sacramento CA 95814-5006	
Phone Number: 714-850-4830		Phone Number: 916-440-7940	
Site/Project Name: San Onofre NPP / April 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/18/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0056-01	Sample ID: R 91944	Time Collected: 4/16/2012 15:35	Sampling Point: SONGS A	
	Sample Type: Seawater			
Tritium	EPA 906.0	-290.1 +/- 158.9	284.4	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shyamala Rubera		Date Received 4-18-12	Lab No. (Leave Blank) 12-0051
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 4/16/12 1535	Serial Number R 91944
Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 997414 MS 7610 Sacramento, CA 95819 Telephone No.: 916-440-7940		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.: _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. 4/16/12 Date	Jenny Smith Name (Print)	4/17/12 Date
1535 Time Custody Received	MBC Organization	1700 Time Custody Released
1535 Date	Jenny Smith Signature	1700 Date
1535 Time Custody Received	VA Organization	1700 Time Custody Released
4-18-12 Date	VA Name (Print)	1700 Date
10:00 Time Custody Received	DWRLB Organization	1700 Time Custody Released
10:00 Date	DWRLB Signature	1700 Date

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ETO.01 MR/HR**



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0055

Collector: Jenny Smith MBC Applied Environmental Science, 3000 Costa Mesa CA Phone Number:	RHB	Requestor: Steve Hsu 1500 Capitol Avenue, MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7940	RHB
Site/Project Name: San Onofre NPP / April 2012			
System No:		Billing Agency: RHB	Samples Received by Lab: 4/18/2012

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0055-01	Sample ID: R 91943 Sample Type: Seawater	Time Collected: 4/16/2012 15:35	Sampling Point: SONGS A	
K-40	EPA 901.1	324 +/- 22.2	82.7	pCi/L

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Stephanie Rubiera		Date Received 4-18-12	Lab No. (Leave Blank) 12-0055
		Date & Time Sampled 4/16/12 1535	Serial Number R 91943
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |


COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Cooled/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input checked="" type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|--|--|---|--|
| 1. Date
4/16/12
Time Custody Received
1535 | Name (Print)
Jenny Smith
Organization
MBC | Signature
 | Date
4/17/12
Time Custody Released
1700 |
| 2. Date
Time Custody Received | Name (Print)
Organization | Signature | Date
Time Custody Released |
| 3. Date
4-18-12
Time Custody Received
10:00 | Name (Print)
UA
Organization
DWRLB | Signature | Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: $\leq 0.01 \text{ mR/hr}$
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0204

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Robert Moore

Date/Time Collected: 03/16/2012 12:15 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91933

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0204-001	SONGS D	EPA 906.0	Tritium	-90.0 ± 142	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 3-20-12	Lab No. (Leave Blank) N12-0204
Collector Information Name: Robert Moore Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, Ca 92626 Telephone No.: 714-850-7483		Date & Time Sampled 3/16/12 1215	Serial Number R 91933
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input checked="" type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: | | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: | | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) | | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LS) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|--|---|-----------------------|--|
| 1. Date 3/14/12
Time Custody Received 1215 | Name (Print) Robert Moore
Organization MBC | Signature [Signature] | Date 3/16/12
Time Custody Released 1600 |
| 2. Date 3/16/12
Time Custody Received 1600 | Name (Print) Jenni Smith
Organization MBC | Signature [Signature] | Date 3/19/12
Time Custody Released 1700 |
| 3. Date 3-20-12
Time Custody Received 10:30 | Name (Print) VA
Organization DWRLB | Signature [Signature] | Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 mR/HR
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH
Director

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California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0203

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/23/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Robert Moore

Date/Time Collected: 03/16/2012 12:15 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91929

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0203-001	SONGS D	EPA 901.1	K-40	380 \pm 21.3	79.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where S_b is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shiyamalie Rubera		Date Received 3-20-12	Lab No. (Leave Blank) N12-0203
Collector Information Name: Robert Moore Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 3/16/12 1215	Serial Number R 91929
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7010 Sacramento, CA 95899 Telephone No.: 916-440-4410	
Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input checked="" type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☒ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☒ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Fed/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | | | | | |
|----|-----------------------|---------|--------------|--------------|-----------|-----------------|-----------------------|---------|
| 1. | Date | 3/16/12 | Name (Print) | Robert Moore | Signature | Robert Moore | Date | 3/16/12 |
| | Time Custody Received | 1215 | Organization | MBC | | | Time Custody Released | 1600 |
| 2. | Date | 3/16/12 | Name (Print) | Jenny Smith | Signature | Jenny Smith | Date | 3/19/12 |
| | Time Custody Received | 1600 | Organization | MBC | | | Time Custody Released | 1700 |
| 3. | Date | 3-20-12 | Name (Print) | VA | Signature | Victoria M. Ali | Date | |
| | Time Custody Received | 1030 | Organization | DWRLB | | | Time Custody Released | |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: $\leq 0.01 \text{ MR/HR}$
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



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Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0202

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 03/16/2012 12:23 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91931

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0202-001	SONGS C	EPA 906.0	Tritium	-86.2 ± 142	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyamalie Rubera		Date Received 3-20-12	Lab No. (Leave Blank) 117-0207
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4030		Date & Time Sampled 3/16/12 1223	Serial Number R 91931
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO BOX 99-7414 MS 71610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input checked="" type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

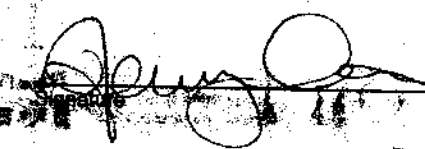

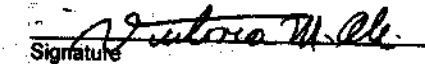
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------------|---------------------------------|--|-----------------------------------|
| 1. | Date 3/16/12 | Name (Print) Jenny Smith | Signature  | Date 3/19/12 |
| | Time Custody Received 1223 | Organization MBC | Signature  | Date 3/16/12 |
| 2. | Date _____ | Name (Print) _____ | Signature _____ | Time Custody Released 1700 |
| | Time Custody Received _____ | Organization _____ | Signature _____ | Date _____ |
| 3. | Date 3-20-12 | Name (Print) UA | Signature  | Time Custody Released _____ |
| | Time Custody Received 10:30 | Organization DWRLB | Signature _____ | Date _____ |
| | | | Signature _____ | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 MR/HR**



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Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0201

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/23/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 03/16/2012 12:23 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91932

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0201-001	SONGS C	EPA 901.1	K-40	317 ± 21.6	79.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-800/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamake Rubera		Date Received 3-20-12	Lab No. (Leave Blank) N12-0301
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 3/16/12 1223	Serial Number R 91932
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-TAH MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input checked="" type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

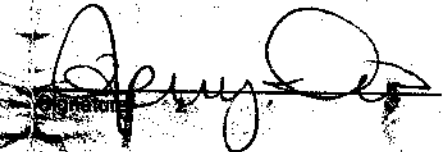

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Iced/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H)
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Americium / Curium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Plutonium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Thorium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Isotopic Uranium
☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-------------------------------------|----------------------------------|---|------------------------------------|
| 1. | Date: 3/16/12 | Name (Print): Jenny Smith | Signature:  | Date: 3/16/12 |
| | Time Custody Received: 1223 | Organization: MBC | Signature: _____ | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. | Date: 3-20-12 | Name (Print): UA | Signature:  | Date: _____ |
| | Time Custody Received: 10:30 | Organization: DWR LBS | Signature: _____ | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- = 0.01 MR/HR**



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0200

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 03/16/2012 12:32 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91940

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0200-001	SONGS B	EPA 906.0	Tritium	5.74 \pm 145	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 3-20-12	Lab No. (Leave Blank) N12-0200
Address: 510-620-2930 Attn: Shiyamalie Rubera		Date & Time Sampled 3/16/12 1232	Serial Number R 91940
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, Ca 92626 Telephone No.: 714		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

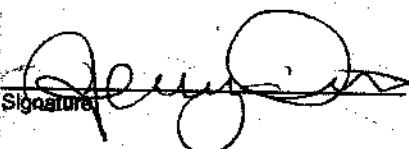
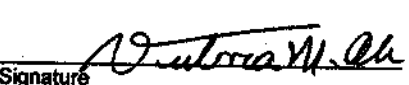
COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------------|---------------------------------|--|-----------------------------------|
| 1. | Date 3/16/12 | Name (Print) Jenny Smith | Signature  | Date 3/16/12 |
| | Time Custody Received 1232 | Organization MBC | | Time Custody Released 1700 |
| 2. | Date _____ | Name (Print) _____ | Signature _____ | Date _____ |
| | Time Custody Received _____ | Organization _____ | | Time Custody Released _____ |
| 3. | Date 3-20-12 | Name (Print) UA | Signature  | Date _____ |
| | Time Custody Received 10:30 | Organization DWRLB | | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 MR/HR**



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0199

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/23/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 03/16/2012 12:32 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91937

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0199-001	SONGS B	EPA 901.1	K-40	376 ± 18.4	62.2	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-800/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G184 Richmond, CA 94804 510-620-2930 510-620-2911 Attn: Shiyamale Rubera		Date Received 3-20-12	Lab No. (Leave Blank) N12-0199
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 3/16/12 1232	Serial Number R 91937
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (BSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1.	Date 3/16/12	Name (Print) Jenny Smith	Signature 	Date 3/16/12
	Time Custody Received 1232	Organization MBC		Time Custody Released 1700
2.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
3.	Date 3-20-12	Name (Print) VIA	Signature	Date
	Time Custody Received 10:30	Organization DWR L B	Signature	Time Custody Released

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 uR/HR



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0198

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 03/16/2012 12:15 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91935

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0198-001	SONGS A	EPA 906.0	Tritium	-68.9 \pm 143	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 3-20-12	Lab No. (Leave Blank) 112-0198
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Date & Time Sampled 3/16/12 1215	Serial Number R 91935
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------|-----------------------------|---------------|-------------------------|
| 1. | Date
3/16/12
1215 | Name (Print)
Jenny Smith | Signature
 | Date
3/16/12
1700 |
| | Time Custody Received | Organization
MBC | | Time Custody Released |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
3-20-12
10:30 | Name (Print)
UA | Signature
 | Date |
| | Time Custody Received | Organization
DWRLB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



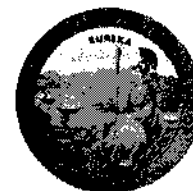
RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0197

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/23/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 03/16/2012 12:15 Date/Time Received: 03/20/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / March 2012

R Number: R 91934

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0197-001	SONGS A	EPA 901.1	K-40	326 ± 17.9	63.1	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 3-20-12	Lab No. (Leave Blank) N12-0197
510-620-2930 Attn: Shiyamalie Rubera		Date & Time Sampled 3/16/12 1215	Serial Number R 91934
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH - RHB Address: PO Box 99-744 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
 Starting: _____
 Net (M³) _____
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

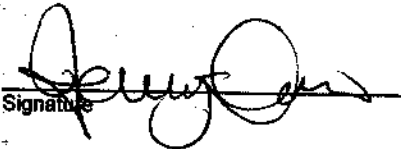

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------------------|------------------------------------|---|--------------------------------------|
| 1. | Date
3/16/12 | Name (Print)
Jenny Smith | Signature
 | Date
3/16/12 |
| | Time Custody Received
1215 | Organization
MBC | | Time Custody Released
1700 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
3-20-12 | Name (Print)
UA | Signature
 | Date |
| | Time Custody Received
1030 | Organization
DWR 13 | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 MR/HR**



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0129

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: James Nunez

Date/Time Collected: 02/15/2012 11:05 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92787

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0129-001	SONGS D	EPA 906.0	Tritium	49.8 ± 146	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Attn: Shiyamalie Rubera		Date Received 2-16-12	Lab No. (Leave Blank) 112-0129
Collector Information Name: James Nuñez Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Date & Time Sampled 2/15/12 1105	Serial Number R 92787
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7010 Sacramento, CA 95899 Telephone No.: 916-440-7440	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Date/Time _____ ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Cooled/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (3H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | | | | | |
|----|-----------------------|---------|--------------|------------------------------------|-----------|-------------|-----------------------|---------|
| 1. | Date | 2/15/12 | Name (Print) | James Nuñez | Signature | [Signature] | Date | 2/15/12 |
| | Time Custody Received | 1105 | Organization | MBC Applied Environmental Sciences | | | Time Custody Released | 1140 |
| 2. | Date | 2/15/12 | Name (Print) | Wayne Dasset | Signature | [Signature] | Date | 2/15/12 |
| | Time Custody Received | 1140 | Organization | MBC Applied Environmental Sciences | | | Time Custody Released | 1700 |
| 3. | Date | 2-16-12 | Name (Print) | U.A. | Signature | [Signature] | Date | |
| | Time Custody Received | 10:30 | Organization | DWR L.B. | | | Time Custody Released | |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: $\leq 0.01 \text{ mR/hr}$
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0128

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/24/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: James Nunez

Date/Time Collected: 02/15/2012 11:05 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92786

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0128-001	SONGS D	EPA 901.1	K-40	333 \pm 18.2	64.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shyamalie Rubera	Date Received 2-16-12	Lab No. (Leave Blank) N12-0128
	Date & Time Sampled 2/15/12 1105	Serial Number R 92786
Collector Information Name: James Nuñez Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, Ca 92626 Telephone No.: 714-850-4830	Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: MBC Applied Environmental Sciences Sampling Point (s): 3000 Red Hill Ave Costa Mesa, Ca 92626 System No.: 714-850-4830 SONGS D	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing: _____ Date/Time: _____
Starting: _____
Net (M³) _____
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 2/15/12 Time Custody Received: 1105	Name (Print): James Nuñez Organization: MBC Applied Environmental Sciences Signature: [Signature]	Date: 2/15/12 Time Custody Released: 1140
2. Date: 2/15/12 Time Custody Received: 1140	Name (Print): Wayne Dosselt Organization: MBC Applied Environmental Sciences Signature: [Signature]	Date: 2/15/12 Time Custody Released: 1700
3. Date: 2-16-12 Time Custody Received: 10:30	Name (Print): VA Organization: DWRLB Signature: [Signature]	Date: _____ Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0127

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Wayne Dossett

Date/Time Collected: 02/15/2012 08:31 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92783

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0127-001	SONGS C	EPA 906.0	Tritium	-17.2 ± 144	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera	Date Received 2-16-12	Lab No. (Leave Blank) N12-0127
	Date & Time Sampled 2/15/12 0831	Serial Number R 92783
Collector Information Name: Wayne Dasseff Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave, Costa Mesa, Ca 92626 Telephone No.: 714-850-4830	Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (BSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input checked="" type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | |
|------------------------------|--|----------------------------|
| 1. Date: 2/15/12 | Name (Print): Wayne Dasseff | Date: 2/15/12 |
| Time Custody Received: 0831 | Organization: MBC Applied Environmental Sciences | Signature: Wayne Dasseff |
| 2. Date: _____ | Name (Print): _____ | Date: _____ |
| Time Custody Received: _____ | Organization: _____ | Signature: _____ |
| 3. Date: 2-16-12 | Name (Print): VA | Date: _____ |
| Time Custody Received: 10:30 | Organization: DWRLB | Signature: Victoria M. Oli |
| Time Custody Received: _____ | Organization: _____ | Signature: _____ |

LABORATORY REMARKS (Leave Blank)

- 4.001 MR/HR
- A. Condition at Time of Receipt:
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



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Director

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0126

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/24/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Wayne Dossett

Date/Time Collected: 02/15/2012 10:30 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92782

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0126-001	SONGS C	EPA 901.1	K-40	309 \pm 20.0	76.0	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Attn: Shiyamalie Rubera		Date Received 2-16-12	Lab No. (Leave Blank) N12-0126
Collector Information Name: Wayne Dossett Dept./Branch: MRC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Date & Time Sampled 2/15/12 0831	Serial Number R 92782
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☒ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 2/15/12 Name (Print): Wayne Dossett
 Time Custody Received: 0831 Organization: MRC Applied Environmental Sciences Signature: Wayne Dossett Date: 2/15/12
 Time Custody Released: 1700
2. Date: _____ Name (Print): _____
 Time Custody Received: _____ Organization: _____ Signature: _____ Date: _____
 Time Custody Released: _____
3. Date: 2-16-12 Name (Print): UA
 Time Custody Received: 10:30 Organization: DWR LRB Signature: Shiyamalie Rubera Date: _____
 Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/LR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0125

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Wayne Dossett

Date/Time Collected: 02/15/2012 08:36 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92778

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0125-001	SONGS B	EPA 906.0	Tritium	-28.7 \pm 144	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 2-16-12	Lab No. (Leave Blank) 112-0125
510-620-2930 Attn: Shiyamalie Rubera		Date & Time Sampled 2/15/12 0836	Serial Number R 92778
Collector Information Name: Wayne Dossett Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M²) _____
☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Radionuclide(s), if known: _____
☐ Other: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|----|------------------------------|--|------------------------------|
| 1. | Date: 2/15/12 | Name (Print): Wayne Dossett | Date: 2/15/12 |
| | Time Custody Received: 0836 | Organization: MBC Applied Environmental Sciences | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | Time Custody Released: _____ |
| 3. | Date: 2-16-12 | Name (Print): UN | Date: _____ |
| | Time Custody Received: 10:30 | Organization: DWRLB | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



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Director

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California Department of Public Health

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0124

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/24/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Wayne Dossett

Date/Time Collected: 02/15/2012 08:36 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92777

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0124-001	SONGS B	EPA 901.1	K-40	319 ± 17.9	63.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 2-16-12	Lab No. (Leave Blank) N12-0124
510-620-2930 Attn: Shyamalie Rubera		Date & Time Sampled 2/15/12 0836	Serial Number R 92777
Collector Information Name: Wayne Dosselt Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4880		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-744 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (3H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|--|---------------------------|------------------------------|
| 1. | Date: 2/15/12 | Name (Print): Wayne Dosselt | Signature: Wayne Dosselt | Date: 2/15/12 |
| | Time Custody Received: 0836 | Organization: MBC Applied Environmental Sciences | Signature: Wayne Dosselt | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. | Date: 2-16-12 | Name (Print): UA | Signature: Victoria M. De | Date: _____ |
| | Time Custody Received: 10:30 | Organization: DWRLB | Signature: Victoria M. De | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0123

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Wayne Dossett

Date/Time Collected: 02/15/2012 08:21 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92776

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0123-001	SONGS A	EPA 906.0	Tritium	-24.9 ± 144	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 2-16-12	Lab No. (Leave Blank) 112-0123
510-620-2930 Attn: Shyamal Rubera		Date & Time Sampled 2/15/12 0821	Serial Number R 92776
Collector Information Name: Wayne Dossett Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-R4B Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: Sampling Point (s): SONGS System No.: A		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------------|----------------------------|------------------------------|-----------------------------|
| 1. | Date _____ | Name (Print) _____ | Signature _____ | Date _____ |
| | Time Custody Received _____ | Organization _____ | | Time Custody Released _____ |
| 2. | Date _____ | Name (Print) _____ | Signature _____ | Date _____ |
| | Time Custody Received _____ | Organization _____ | | Time Custody Released _____ |
| 3. | Date 2-16-12 | Name (Print) UA | Signature [Signature] | Date _____ |
| | Time Custody Received 10:30 | Organization DWR/RB | Signature [Signature] | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:**
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|
- ≤ 0.01 MC/HR**



RON CHAPMAN, MD, MPH
Director

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California Department of Public Health

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0122

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/24/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Wayne Dossett

Date/Time Collected: 02/15/2012 08:21 Date/Time Received: 02/16/2012 10:30

Site Name: San Onofre NPP

Source Name: SONPP / February 2012

R Number: R 92775

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0122-001	SONGS A	EPA 901.1	K-40	343 \pm 22.0	80.2	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 2-16-12	Lab No. (Leave Blank) N12-0122
Address: 510-620-2930 Alt: Shiyamalie Rubera		Date & Time Sampled 2/15/12 0821	Serial Number R 92775
Collector Information Name: Wayne Dossett Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-950-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RHB Address: PO Box 99-744 MS 7010 Sacramento, CA 95899 Telephone No.: 916-446-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ ☐ Field/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: **2/15/12** Name (Print): **Wayne Dossett** Date: **2/15/12**
 Time Custody Received: **0821** Organization: **MBC Applied Environmental Sciences** Signature: **Wayne Dossett** Time Custody Released: **1700**
2. Date: _____ Name (Print): _____ Date: _____
 Time Custody Received: _____ Organization: _____ Signature: _____ Time Custody Released: _____
3. Date: **2-16-12** Name (Print): **UA** Date: _____
 Time Custody Received: **10:30** Organization: **DWR LRB** Signature: **Victoria Y. Ali** Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** **≤ 0.01 MR/HR**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



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Director

State of California - Health and Human Services Agency
California Department of Public Health

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0046

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/17/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: James Nunez

Date/Time Collected: 01/16/2012 11:00 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92729

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0046-001	SONGS D	EPA 901.1	K-40	305 \pm 22.1	84.2	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 1/17/12	Lab No. (Leave Blank) N12-0046
Date & Time Sampled 1/16/12 1100		Serial Number R 92729	
Collector Information Name: James Nuñez Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4800		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95834 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|-----------------------------|--|------------------------|--------------------------------|
| 1. | Date: 1/16/12 | Name (Print): James Nuñez | Signature: [Signature] | Date: 1/16/12 |
| | Time Custody Received: 1100 | Organization: MBC Applied Environmental Sciences | Signature: [Signature] | Time Custody Released: 1139 |
| 2. | Date: 1/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 1/16/12 |
| | Time Custody Received: 1139 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 3. | Date: 1/17/12 | Name (Print): [Blank] | Signature: [Signature] | Date: [Blank] |
| | Time Custody Received: 1345 | Organization: DWRLB | Signature: [Signature] | Time Custody Released: [Blank] |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 uR/hr



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0047

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/13/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: James Nunez

Date/Time Collected: 01/16/2012 12:00 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92730

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0047-001	SONGS D	EPA 906.0	Tritium	101 \pm 166	282	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11/17/12	Lab No. (Leave Blank) N12-0047
	Date & Time Sampled 11/16/12 1100	Serial Number R 92730
Collector Information Name: James Nuñez Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 949-485-4831	Reporting Information Name: Steve HSU Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7941	
Sample Information System Name / Facility: SONGS Sampling Point (s): D System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |

- | | | | |
|--|-----------------|--|---|
| <input type="checkbox"/> Air Filters
Finishing: _____
Starting: _____
Net (M ³) _____ | Date/Time _____ | <input checked="" type="checkbox"/> Seawater
<input type="checkbox"/> Milk
<input type="checkbox"/> Wipes
<input type="checkbox"/> Radon Canister | <input type="checkbox"/> Sludge (Semi-solid Samples)
<input type="checkbox"/> Soil/Sediment
<input type="checkbox"/> Biota (Type): _____
<input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____ | <input type="checkbox"/> Iced/Frozen: _____ | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Field Measurement: _____ mR/hr | <input type="checkbox"/> Radionuclide(s), if known: _____ | |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) | | |

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|---|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input checked="" type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|---|---|------------------------|---|
| 1. Date: 11/16/12
Time Custody Received: 1100 | Name (Print): James Nuñez
Organization: MBC Applied Environmental Sciences | Signature: [Signature] | Date: 11/16/12
Time Custody Released: 1139 |
| 2. Date: 11/16/12
Time Custody Received: 1139 | Name (Print): Jeany Smith
Organization: MBC | Signature: [Signature] | Date: 11/16/12
Time Custody Released: 1700 |
| 3. Date: 11/17/12
Time Custody Received: 13:45 | Name (Print): [Blank]
Organization: DWRLB | Signature: [Signature] | Date: [Blank]
Time Custody Released: [Blank] |

LABORATORY REMARKS (Leave Blank)

- ≤ 0.01 mR/HR
- | | | | | |
|----------------------------------|--|--|--|---|
| A. Condition at Time of Receipt: | <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| | <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
| B. Preservatives/Carriers: | <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |



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Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0043

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 01/16/2012 08:53 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92727

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0043-001	SONGS C	EPA 901.1	K-40	329 ± 17.3	59.2	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 1/17/12	Lab No. (Leave Blank) N12-0043
Date & Time Sampled 1/16/12 0853		Serial Number R 92727	
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RHB Address: PO Box 99-7414 MS/7600 San Francisco, CA 95819 Telephone No.: 415-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input checked="" type="checkbox"/> Milk | <input type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Cold/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input checked="" type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (TSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|------------------------------|---------------------------|------------------------|------------------------------|
| 1. Date: 1/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 1/16/12 |
| Time Custody Received: 0853 | Organization: MBC | Signature: [Signature] | Time Custody Released: 1700 |
| 2. Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| Time Custody Received: _____ | Organization: _____ | Signature: _____ | Time Custody Released: _____ |
| 3. Date: 1-17-12 | Name (Print): UA | Signature: [Signature] | Date: _____ |
| Time Custody Received: 1345 | Organization: DWRLB | Signature: [Signature] | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|
- 50.01 MR/HR



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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0045

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/13/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 01/16/2012 08:53 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92728

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0045-001	SONGS C	EPA 906.0	Tritium	-42.9 \pm 163	282	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 Alt: 510-620-2930 Alt: Sanitation and Radiation Branch		Date Received: 1/17/12 Date & Time Sampled: 1/16/12 0853	Lab No. (Leave Blank): 112-0045 Serial Number: R 92728
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-350-4330		Reporting Information Name: Steve Hsu Dept./Branch: CDPII - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-220-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): C System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
 Starting: _____
 Net (M³): _____
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Cooled/Frozen: _____ Other: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|----|---|--|--|
| 1. | Date: 1/16/12
Time Custody Received: 0853 | Name (Print): Jenny Smith
Organization: MBC | Signature: [Signature]
Date: 1/16/12
Time Custody Released: 1700 |
| 2. | Date: _____
Time Custody Received: _____ | Name (Print): _____
Organization: _____ | Signature: _____
Date: _____
Time Custody Released: _____ |
| 3. | Date: 1/17/12
Time Custody Received: 13:45 | Name (Print): J.A.
Organization: DWRLB | Signature: [Signature]
Date: _____
Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: = 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



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Director

State of California - Health and Human Services Agency
California Department of Public Health

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0041

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 01/16/2012 09:10 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92723

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0041-001	SONGS B	EPA 901.1	K-40	305 \pm 22.7	86.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2911 Amy Shuy-marie Rivera		Date Received 11/17/12	Lab No. (Leave Blank) N12-0041
		Date & Time Sampled 11/16/12 0910	Serial Number R 92723
Collector Information Name: Jenny Smith Dept/Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-350-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: Sampling Point (s): System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCBY () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	
SONGS B			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing: _____ Date/Time: _____
Starting: _____
Net (M³) _____
☒ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Bed/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date: 11/16/12 Name (Print): Jenny Smith
Time Custody Received: 0910 Organization: MBC
Signature: [Signature]
Date: 11/16/12
Time Custody Released: 1700
2. Date: _____ Name (Print): _____
Time Custody Received: _____ Organization: _____
Signature: _____
Date: _____
Time Custody Released: _____
3. Date: 11/17/12 Name (Print): UA
Time Custody Received: 13:45 Organization: DWRLB
Signature: [Signature]
Date: _____
Time Custody Released: _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 6-0.01 MK/HR



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California Department of Public Health

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0042

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/13/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 01/16/2012 09:10 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92724

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0042-001	SONGS B	EPA 906.0	Tritium	137 \pm 167	282	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911 510-620-2930 Alt. Sampling Location		Date Received 1/17/12	Lab No. (Leave Blank) N12-0042
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, Ca 92626 Telephone No.: 714-850-4830		Date & Time Sampled 1/16/12 0910	Serial Number R 92724
Sample Information System Name / Facility: SONGS Sampling Point (s): B System No.:		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, Ca 95899 Telephone No.: 916-440-7940	
Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☒ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☒ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☒ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|---------------------------|------------------------|------------------------------|
| 1. | Date: 1/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 1/16/12 |
| | Time Custody Received: 0910 | Organization: MBC | | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | | Time Custody Released: _____ |
| 3. | Date: 1-17-12 | Name (Print): J.A. | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 12:45 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0039

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/02/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 01/16/2012 09:01 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92721

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0039-001	SONGS A	EPA 901.1	K-40	334 \pm 22.7	83.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 11/17/12	Lab No. (Leave Blank) N17-0039
Date & Time Sampled 11/16/12 0901		Serial Number R 92721	
Collector Information Name: Jenny Smith Dept/Branch: MRC Applied Environmental Sciences Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept/Branch: CDPH - RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95834 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
 Starting: _____
 Net (M³) _____
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Ice/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (3H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|---------------------------|------------------------|------------------------------|
| 1. | Date: 11/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 11/16/12 |
| | Time Custody Received: 0901 | Organization: MRC | | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | | Time Custody Released: _____ |
| 3. | Date: 11/17/12 | Name (Print): UA | Signature: _____ | Date: _____ |
| | Time Custody Received: 1245 | Organization: DWRLB | Signature: _____ | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** ≤ 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH
Director

State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N12-0040

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/13/2012

Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

Site and Sample Information

Collector's Name: Jenny Smith

Date/Time Collected: 01/16/2012 09:01 Date/Time Received: 01/17/2012 13:45

Site Name: San Onofre NPP

Source Name: SONPP / January 2012

R Number: R 92722

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result \pm CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0040-001	SONGS A	EPA 906.0	Tritium	10.7 \pm 164	282	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA₉₅ is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD₉₅ divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD₉₅ is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 1/17/12	Lab No. (Leave Blank) N12-0040
Address: 510-620-2911 Alt: Springfield Rd.		Date & Time Sampled 1/16/12 0901	Serial Number R 92722
Collector Information Name: Jenny Smith Dept./Branch: MBC Applied Environmental Science Address: 3000 Red Hill Ave. Costa Mesa, CA 92626 Telephone No.: 714-850-4830		Reporting Information Name: Steve Hsu Dept./Branch: CDPH-RHB Address: PO Box 99-7414 MS 7610 Sacramento, CA 95899 Telephone No.: 916-440-7940	
Sample Information System Name / Facility: SONGS Sampling Point (s): A System No.:		Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____
☐ Milk ☐ Soil/Sediment
 Starting: _____
☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____
☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____
☐ Field Measurement: _____ mR/hr
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Vial/Frozen: _____
☐ Radionuclide(s), if known: _____

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (TSC) ☐ NORM (Gamma)
☐ Total Radium ☒ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|------------------------------|---------------------------|------------------------|------------------------------|
| 1. | Date: 1/16/12 | Name (Print): Jenny Smith | Signature: [Signature] | Date: 1/16/12 |
| | Time Custody Received: 0901 | Organization: MBC | | Time Custody Released: 1700 |
| 2. | Date: _____ | Name (Print): _____ | Signature: _____ | Date: _____ |
| | Time Custody Received: _____ | Organization: _____ | | Time Custody Released: _____ |
| 3. | Date: 1-17-12 | Name (Print): VA | Signature: [Signature] | Date: _____ |
| | Time Custody Received: 13:45 | Organization: DWRLB | | Time Custody Released: _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 MR/HR
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable